#56

STUDY FOR THE IMPROVEMENT OF MOTIVATION IN THE SHIPBUILDING INDUSTRY

PHASE I

ORIGINAL ISSUE

Dr. George A. Muench
and Associates.

San Jose State University

San Jose, California 95192

June 1976

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
JUN 1976	**N/A**	**-**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Study for the Improvement of Motivation in the Shipbuilding Industry Phase 1	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Naval Surface Warfare Center CD Code 2230 - Design Integration Tools Building 192 Room 128-9500 MacArthur Blvd Betheda, MD 20817-5700**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**UU**	**174**	

This study is intended to be read in its entirety. The results of the study develop optimum significance and meaning when perceived within the emergent process of the research. The first chapter introduces the study in terms of its purposes and procedures. The next chapter surveys the general literatur pertinent to motivation in industry organized according to the research plan of this study. The next chapter reports in depth the results from the current study, including composite data for the total industry, as well as a brief comparison of ten separate local shipyards.

Although executives involved in the decision-making process in the industry would be well advised to read the entire study, many executives would find such reading to be a luxury prohibited by other critical time commitments. Therefore, the primary results of the study have been summarized in terms of pertinent conclusions and recommendation for the immediate utilization by the interested but busy executive.

Executive Summary

One of the most significant motivating factors for workers is to believe that the company management is interested in the individual worker and his problems and is willing to attempt to do something about them. Although a limited understanding of workers needs may be obtained from the research Literature on worker motivation, since workers are unique, the only way to really understand the workers needs in a particular

industry or particular company is to directly ask the individual local workers. Further, even the process of attempting to determine the worker's needs and problems is motivating, since it tends to help the worker to feel that the company cares enough to ask him. Those responsible for initiating this study, then, have taken a significant first step in improving motivation.

Since motivation in industry is a complex phenomenon, for the purpose of this study motivation has been analyzed in terms of relationships to some of its various segments beginning with job satisfaction, the core factor around which all the other "dimensions of the motivational process would evolve. The. factors, in addition to job "satisfaction include job commitment and morale, job importance, working conditions and benefits, workers perceptions of co-workers, promotion, and supervisor-worker relationships.

The bo dy of the report is organized around the aforementioned categories and the results are reported accordingly. For the purposes of this summary, however, an attempt is made to utilize the direct data from this study interrelated with other research data to present some conclusions and recommendations which are aimed toward developing a more effective motivational system at the local shipyard level. The se conclusions relate mainly to the quantitative data and are presented, not in terms of priority importance, but in sequential order.

1. Nearly 1,300 employees, representing all segments of personnel at ten shipyards, were utilized for this study. From this total sample, only a small percentage of workers chose shipbuilding b ecause of a love of the sea, or family tradition, or patriotic reasons, but most worker; took a job at a shipyard primarily because a job was available. There tends to be no more romantic worker identification with obtaining a job in a shipyard than in comparable industries.

2 .While recognizing the validity of the above finding, there is another finding which relates,to work pride regarding both product “and process. Nearly all shipyard workers deem both shipbuilding as an industry and their own job in the process of shipbuilding to be essential for the national defense, economy and commerce of this country. This product identification has not been sufficiently emphasized at most shipyards. Employee pride related to product is, if effectivel utilized, an inherent motivator.

3 . Current literature tends to indicate that the industrial worker in America is unhappy with his job. The interviewers for this study expended most of their interview time in listening to worker complaints and-negative comments related to both job and company. When a final evaluation needed to be made, however, most workers tended to rate their overall job satisfaction high and, at least at America’s shipyards, had a high level of job identification.

4. Worker motivation tends to increase when jobs are designed to provide the worker with what he perceives to be

meaningful work. When his job allows the worker to feel personally responsible for a meaningful portion of his work, and provides results which are perceived as worthwhile to the individual worker, motivation increases. Further, the job must match the capabilities and skills of the employee. If a job is too frustrating or difficult, or too simple and boring, motivation decreases. T o effectively match the employee to his job requires continual evaluation of each job and the employee qualities necessary to fulfill it.

5 . Although most shipyard workers believe their job in an essential. industry to be highly important, many believe that their company's management has n o interest in them as persons, is unaware of what they do, and is oriented to machines rather than persons.

6. Most hourly production workers believe that they do not influence the company in any important ways. The fewer than twenty percent of the workers who believe their influence is important perceive that influence to come primarily in the way they perform their own job. The majority of workers who believe that they cannot influence the company in important ways cited that it was futile to try, that the company didn't care or was too big or set in its ways, or that their low position or lack of knowledge prohibited their influence.

7. The most common spontaneous complaint among production workers which is related to working conditions concerned

inadequate scheduling, planning, coordinating and communication between crafts, shifts and various working groups in the shipyard. The second greatest number of complaints related to inadequate machines, equipment and materials. The third most common complaint concerned some aspect of the physical working environment.

8. Safety was the physical factor most frequently discussed by the workers and, although all were concerned with safety, about as many believed the company to be safety conscious and working on improving safety conditions as believe the yard to be negligent related to safety. Safety was considered a greater problem to hourly production workers than any other employee group.

9. The workers perceptions of the adequacy of their wages produced a mixed result. Some workers believed the pay to be superior to that in some comparable industries; others believe their pay to be low and not comparable to other companies or construction workers. Wages tended to be less a problem, however, to most workers than problems already cited.

10. Wages become increasingly motivating when workers perceive that their pay is directly related to their performance. Oftentimes pay is related to non-performance factors such as job level or seniority and, therefore, comparatively less motivating. Consequently, some companies have elected to use some incentive system to tie more closely production to wages. Normally most incentive systems indicate greater success by

relating to an individual, rather than group, performance. The experience of at least one shipyard suggests some evidence to the contrary. Althoug h the incentive pay tied to the individual's work performance has been normally most motivating more experimentation needs to be done with group incentives programs in order to determine whether the group incentive, when effectively organized, may prove additionally motivating due to group identification or group pressures not present in individual incentive plans.

11. If effectively done, measuring a workers performance can be highly motivating. This means that an effective job measurement system including specific criteria for evaluation must be available in addition to a feedback system which provides the worker with immediate knowledge of results and recognition for superior performance:

12. One of the most important motivational factors is the relationship of the worker to his immediate supervisor. Although it is impossible to define all of the characteristics of the "perfect" supervisor, effective leadership does include the leader's sensitivity to those factors which influence the personal and interpersonal work behavior of group members, the ability to analyze those factors impairing personal or group effectiveness, and the empathy and consideration necessary to individual needs which allow the group to keep moving.

13. The current study indicates that the employees' relationship to his immediate supervisor is a key one, and

for a significant majority, a positive one. Among the positive factors most frequently mentioned about the workers' immediate supervisor include the following: his technical competence, fair treatment, good human relationships, helpful, and freedom to do the job. The negative comments related to the workers immediate supervisor were fewer and less consistent but included the following: overcritical, shows favoritism, inadequate leader, poor communicator, technically incompetent For most employees, the relationship with the immediate supervisor tends to be better than the workers' opinion of and relationship with higher management.

14. Feedback at all levels is essential. An employee will tend to improve his performance if he has continuing feedback related. to his progress. It is important for the supervisor at the upper levels of management to give consistent feedback related to performance just as it is the supervisor of the hourly worker. Feedback, both positive and negative, needs to be clearly understood by both supervisor and worker, and presented. in a manner which motivates constructive short and long-range changes.

15. Some workers are more motivated when the supervisor gives them 4 considerable amount of his time while other workers work best with a minimum of supervisor surveillance. For example, the younger workers tend to need and request more attention and direction from their supervisors than do the older, more experienced workers. In fact, sometimes the

older workers consider the supervisory attention more of an interference than a help. However, some workers no matter their age and experience, need considerable feedback, so that the useful generalization related to age still must be individually applied.

16. Positive reinforcement (commending good performance) is generally considered a superior motivator to negative reinforcement (reproof for poor performance) . Generally the shipyard industry, at all levels of the organization, emphasize negative rather than positive reinforcement. Some companies in industries other than shipbuilding who have attempted a change from censure to commendation report immediate and, occasionally, miraculous positive results.

17. Although positive reinforcement is generally a superior motivator to negative reinforcement, some employees, normally the most competent ones, may be motivated by reproof rather than commendation, or are self-motivated and need little external motivation. The principle of reinforcement, like every motivation technique, must be applied appropriately to the unique needs of the individual worker. Generally positive reinforcement is the superior motivator but, to be optimally effective," the supervisor must understand his workers well enough to discern which motivational techniques work best for each worker.

18. Some employees are sufficiently motivated by internal satisfactions which comes from the employee's own realization

that he has done an effective or superior job. Most workers, however, in addition to internal satisfaction, also need external recognition. Merit salary increases, promotions and increased responsibility and recognition are common and effective ways to acknowledge deserving performmce. Since such recognition is not always possible, these means may need to be. supplemented by a recognition system which provides other kinds of rewards or awards to individuals or groups for exceptional performance.

19. Employees at all levels of the shipyard tend to have a high regard for their co-workers, including both technical competence and positive interpersonal relationships. This finding was one of the most consistent and significant results from the study.

20. Only about one-half of the hourly production workers, however, believe that the majority of their co-workers worked sufficiently hard to do the job although, generally, the closer the proximity of the worker, the harder he was perceived to work. That is, most workers indicate that they work harder than their immediate peers, who work harder than workers in other related departments, who work harder than workers in most departments more distant from the workers station.

21. In comparing production managers to hourly production workers, the conclusions are as follows: production managers have higher job satisfaction, enjoy their jobs more, identify more with the company; have higher morale; perceive that they

have a greater influence at the company; believ e that their problems and recommendations get greater action; are more satisfied with wages and benefits with the exception of longer unpaid working hours; believe safety conditions to be better; and have a greater desire to be promoted, have a higher expectation of being promoted, and think more highly of the promotion process.

22. Much experimentation has occurred with participative management or participative decision-making as a motivational concept. Most studies, both within and without the ship-building industry, indicate that participative decision-making normally results in increased motivation and productivity of those involved. When the worker participates in making decisions which effect him, he is more likely to be motivated to make those decisions succeed. The success is greater when the employees possess high competence and high needs for independence and are members of a group that favor partici-pation. The quality of the group decisions are enhanced when the employees have sufficient relative information and time for discussion", and when employee self-interests do not conflict with the group interests.

23. Effective communication within a company demands constant vigilance. Every shipyard represented in this study suffered from communication problems, some severe. It may be impossible to eliminate all problems of communication within an organization but much can be done to improve communication. First, there must be a genuine desire to communicate at the

various levels of the organization. Second, communication must be recognized as multi-dimensional with attention given to horizontal as well as two-way vertical communication. This means that effective communication channels need to be found to transmit information from management to employees and, an area frequently ignored, from the employees to management. Formal means of communication, such as company newspapers, closed-circuit television, employee suggestion systems, attitude measurement programs and the like, need to be supplemented by more human contacts of management and workers. This is difficult in large organizations, but some companies-find that when top,management gets out of the confines of their admin.-istrators offices and has direct personal contact with the workers through plant tours, informal talks, etc. that both communication and motivation improve.

24. Contrary to certain research hypotheses held prior to this study which presupposed a less than healthy shipbuilding industry, the results of this study are encouraging in that many more strengths than weaknesses are apparent at most shipyards. This does not mean that serious motivational problems do not exist. It does mean that for most yards the strengths portend both the ability and the motivation to recognize weaknesses and attempt to. alleviate them. An attempt has been made in this report to crystallize inter-company and intra-company comparisons according to the factors utilized in this study. Hopefully these data may be used

as the foundation to develop programs at the local yards aimed at perfecting the motivational processes.

TABLE OF CONTENTS

Preface

Objective research in the area of employee motivation has contributed significantly to our knowledge of human behavior in business and industry. Many companies have discovered a more efficient utilization of their work forces through a deeper understanding of worker motivation provided by research. Although some of the motivational research may be applicable to industry in general, minimal research has been conducted concerning employee motivation directly within the shipbuilding industry. The research reported in this study is one attempt to determine motivation techniques existent in the shipbuilding industry and to recommnend alternative procedures which may offer potential for increased worker job satisfaction and productivity.

The author is indebted to numerous individuals and groups who helped in the development of this study. He wishes particularly to acknowledge the contributions of the Maritime Administration, who financially supported this research, and Jack Garvey of the Maritime Administration who made helpful suggestions along the way; to Newport News Shipbuilding Co., and especially Al Winall, who more than any other person supported this project, and Jack Diesel, President, and Tom Savas, Senior Vice President of Newport News, who used their executive offices for encouragement and support; to the SP-5 panel of the Ship Production Committee of The Society of Naval Architects and Marine Engineers, under the direction

of Rick Thorpe, who generously contributed their time and wisdom in crystallizing the problem and guiding its development; to all our clinical interviewers, especially Mary Ann Westerhouse who visited every shipyard, and Dr. Harold Richardson and Dr. Lowell Walter, who visited most; to Dr. Robert Clarke, who helped with the statistical analysis of the data and developed the program for computer analysis; to Don Berti and Marion Weide whose careful criticisms and timely suggestions have helped immeasurably in the preparation of the material; to Eleanor Muench, for her careful accountability of the projects records and especially for her helpful encouragement throughout the study; and to we many unnamed participants both at the university and the local shipyards, from hourly workers to graduate students to company presidents without whose help and cooperation the process and product of this research would not have been possible.

CHAPTER I

INTRODUCTION AND RESEARCH PROCEDURE

A considerable body of data tend to indicate that the industrial worker in contemporary America is unhappy with his job. This unhappiness has been expressed in various ways, including such indirect reactions as psychosomatic illness and the excessive use of drugs and alcohol,and more directly through feelings which include frustrated aspirations and the perception of lives wasted to behavioral expressions of resignations, alienations, and violence (Kornhauser, 1965; Work in America, 1973).

Worker discontent has concerned business leaders, particularly in regard to how worker unhappiness relates to absenteeism, job turnover, decreased motivation, inefficient workmanship and, in turn, productivity and profitability. In an attempt to find solutions to such problems, organizations have experimented with different programs, ranging from job enrichment to sensitivity sessions to participatory management (Herrick, 1971; Luthan & White, 1971; Staauss, 1973). Although most experimental programs related to worker discontent have been conducted by companies not involved in shipbuilding, the recognition of the problem and attempts to deal with it have been evident in certain maritime industries, particularly outside of the U.S. (Hill, 1973).

In 1974 as a result of a recommendation by Panel SP-5 of the Ship Production Committee of The Society of Naval Architects and Marine Engineers, the Newport News Shipbuilding Company

entered into a cost sharing agreement with the Maritime Administration, United States Department of ,Commerce, in an attempt to determine the extent of labor job satisfaction or dissatisfaction and, from the data, to discover what might be done to make shipbuilding a more satisfying and productive occupation. Subsequently a contract was completed with Dr. George Muench of San Jose State University to conduct a study with the following objectives: 1) to determine the labor motivation techniques existant in the shipbuilding industry; 2) to determine the employees perceptions of the efficacy of those techniques; and 3) to recommend alternative techniques or new applications of existing ones which offer potential for increased worker job satisfaction and productivity.

Procedure.

Following the contract agreement in the latter day of 1974, Mr. J. P. Diesel, president of Newport News Shipbuilding Company sent out a letter to 16 shipyards requesting their cooperation and participation in the study. Of the 16 shipyards solicited, eleven accepted the invitation to participate. TWO other shipyards agreed to participate but, due to labor unrest or other local problems after their acceptance, asked to be excluded from the study.

Meanwhile, the San Jose research group held a series of meetings to determine the most efficacious way to obtain the desired data. The first task was conceived to be a thorough library search for any data pertinent to the current study.

Textbooks, monographs, and especially past and current . journals in business and psychology were examined to obtain data related to motivation and particularly motivation in heavy industry. These data are presented in Chapter II.

Then after evaluating alternate methods of data collection, it was eventually determined to utilize a direct interview technique with a stratified sample, randomly selected within groups, from the chief executive officer through the hourly workers. As a guide in the interview process, a questionnaire was developed which was to be used by the professional" interviewers. The original questionnaire was "to experience three revisions before it was eventually finalized.

Fifteen different interviewers participated in the study including nine professional psychologists, five graduate students, and one former business executive who is especially conversant with motivational problems. All interviewers are technically qualified and experienced in interviewing procedures and, in addition, training sessions were held for the interviewers in order to demonstrate the particular interviewing methodology to be used for this study.

At the completion of the interview-trating and review sessions for the San Jose interviewers, attempts. were made to arrange site visits with the participating companies. Each company was requested to send a print-out of all the company employees prior to the site visitation so that the

interviewees could be selected beforehand. An attempt was made to sample randomly the following stratified groups: top management, middle management production, middle management support services, professional support services, non-professional support services, foremen, and hourly workers. The names or employee numbers of those selected were relayed by telephone or letter to the respective companies so that a schedule for each interviewer could be established prior to the site visitation. This procedure; with. some variations due to differences in the formats of the employee printouts, was followed with the exception of one company which insisted on selecting their subjects on. an employee available basis.

Normally all interviews were conducted within a three-day period at the company site. An interview team usually o consisted of six members who were scheduled at 45 minute intervals with most hourly and salaried non-management personnel. An hour was normally allotted for interviews with top managerial personnel. Attempts were made at each shipyard. to allay fears and gain cooperation. with all participants prior to the site visit.

Interviews were always conducted with the assurance of employee confidentiality, and normally were held in a private office. At two yards, however, the required number of offices were not available, so that several interviews were held concurrently in large rooms. The interview content was still

deemed to be private and confidential. At one company, due to unforeseen scheduling difficulties, the three-day period proved to be insufficient time so one interviewer-returned at a later date to complete the interview process.

During the three day site visitation, the interview staff held frequent sessions comparing interview data, including a final session after most of the interviews had been completed. This was done in order to collate data to feed back to each shipyard a tentative summary of. interview results. At five shipyards, the de-briefing was presented to the chief executive officer alone (president or general manager), at two yards the data were presented to a group of top managers meeting together, at two other yards the findings were given to several top managers seen separately, and at one shipyard, no feedback was requested. The chief executive officer at each shipyard was assured that he would receive both a copy of the final written report, and any other non-reported data that would be unique to his organization. All written data utilized in any report for general distribution were guaranteed to be presented in a form in which they could not be identified with any particular shipyard.

Data Analysis

Although the data analysis did not require complex statistical manipulations, it was a long and involved process. The basic data to be analyzed were of two general types:

a) ratings on 5-point scales (with 6 signifying “don’t know”) and b) spontaneous comments of the workers which were routinely recorded by the interviewers. Some questions were of the “yes-maybe-no” or “good-fair-bad" type and called for ratings as well as comments (e.g., “Is your job important?”), whereas other questions allowed only “for comments (e.g., “what is your biggest gripe?”). The ratings, since they were in numerical form, were easily transformed into numerical punches on IBM cards.” However, the spontaneous comments were in verbal form and could not be transformed to any quantitative “scale because of their qualitative nature. As a consequence they were considerably more difficult to deal with and required the bulk of the attention and effort given to the data analysis. . . .

It was deemed essential to preserve, to as great a degree as possible, the spontaneous nature of the comments. Therefore, the categories used in coding the spontaneous comments were not developed beforehand on the basis of any notions about how the workers should respond but, instead, were developed from how the workers actually did respond. Each interviewer listed verbatim, by question, all the responses he or she obtained from production workers at yards 1, 2, and 3.. For each question the verbatim responses were closely examined and where similar responses (in meaning or intent--not in exact wording) were observed, general response categories were formed and assigned numerical codes. Admittedly

this process required considerable judgement and Understanding of what the production workers were saying. In this way, a set of categories and corresponding numerical codes for coding production workers spontaneous responses were developed for each of the questions on the interview schedule.

It soon became apparent that six of the questions, those calling for general impressions of the yard (e.g. What can the company do to make your job better?", 'What is your biggest gripe") all elicited similar types of responses. Therefore, a single set of categories known as the "gripe list" was developed for coding the responses to these six questions. Although the response categories listed on the . gripe list for production workers were worded in negative fashion, they were treated in positive fashion for those questions calling for positive responses (e.g. 'What do you like about the company?")

The set of coding categories and the gripe list described above were developed for production workers. The next step involved obtaining lists of the verbatim responses from companies 1, 2, and 3 for production management, support-services management, professional support services workers and non-professional support services. Close examination indicated that many of the responses obtained from the other types of employees were considerably more complex and emphasized different content than the production workers' responses. Therefore, a second set of coding categories and

a second gripe list were developed for all employees who were not hourly production workers.

Once the two sets of coding categories and the two gripe lists were developed, each interviewer used these materials in coding the responses of his own interviewees. Although the coding categories and gripe lists were developed from the .responses obtained at Companies 1, 2, and 3, they were used in coding the responses from all ten companies.

For each interviewee the interviewer recorded the numerical codes for both ratings and the spontaneous comments on a recording sheet which was designed in such a way. as to allow for speedy and accurate key punching Sufficient columns were allotted on each interviewer's recording sheet to allow up to two spontaneous comments to be coded for each question.

A number of the interviewees responded to questions with spontaneous comments that did not fall into any of the "official" coding categories. Such comments were assigned a numerical code for "miscellaneous" and were summarized in as few words as possible on the recording sheets. In addition, a variety of identifying data (e.g., type of job, time with company) were coded in numerical form and recorded.

The remainder of the data analysis consisted of summarizing the data on the recording sheets. A computer program was developed for obtaining the frequencies and percents of cases giving each rating and each category of comment on each question The recording sheets were keypunched and processed through

the computer in various groupings according to certain of the identifying data (e. g., by company, by type of employee) The miscellaneous comments which could not be coded, were summarized by hand. The computer printouts and the hand summaries provided the basis for both the narrative and qualified tables contained in this report.

Organization of Report

The current chapter has served to introduce the study in terms of its purposes and procedures. The next chapter surveys the background literature pertinent to motivation in industry, organized according to the subject categories used for this study. For the reader who chooses to study in depth what has been reported by investigators from other industries, the next chapter will be of signal value. The reader oriented only to the current shipyard study should go directly to chapter three which reports the results from the current study The busy executive or casual observer who prefers to read only a summary of the study with its conclusions and recommendations should go directly to Chapter Four.

CHAPTER II

REVIEW OF LITERATURE

What motivates workers to work productively and efficiently is of prime importance to industrial leaders, but the issue is intertwined with physical and psychological complexities. The vast amount of recent literature reporting studies related to motivation in industry testifys to the complexity of the issue. Historically, different investigators may report contradictory results when studies are replicated in different industrial settings (Locke, 1968; Pritchard & Curtis, 1973). Such contradictions do not necessarily infer that either,of the studies is wrong; rather., the contradictions probably testify to the complexity of the variables operating in particular industrial settings.

Such differing results do not mean, either, that applicable and useful conclusions cannot be derived from , such investigations.. Rather it means that the intertwining variables operating in any investigation must be under surveillance and one way to accomplish this goal is to relate to segments of the complexity in their relationships to one another. Therefore, for the purposes of this study, the general topic of motivation in industry has been analyzed in terms of relationships to some of its various segments beginning with job satisfaction. Since the literature related to motivation in industry is so multi-dimensional, it was determined for this study that job satisfaction would be

the core factor around which all the other dimensions of the motivational process would evolve. This review, then, begins with the primary dimension of job satisfaction which acts as the umbrella under which all other motivational dimensions become related. Thee factors reviewed,addit to job satisfaction, are as follows: job commitment and morale,job importance, working conditions and benefits, workers perceptions of co-workers, promotion and supervisor-worker relationships.

Job Satisfaction

Job satisfaction is known to be importantly related to motivation and, in turn, to "productivity but the precise relationships still seem unclear. For example, Locke (1975) reports that job satisfaction has little causal impact on productivity. In fact, where a relationship exists, it is suggested that the causal relationship may be in reverse, i.e. high productivity leads to high job satisfaction rather than the other way.

On the other hand, it is well known that high job dis-satisfaction is causally related to high job turnover and absenteeism. Porter and Steers (1973) report workers will tend to stay on their jobs when they are satisfied with certain conditions such as equitable pay, opportunities for promotion, considerate supervisory style, small group size, characteristics of the job (autonomy, responsibility, variety), and compatible job interests. Although it is agreed that

there is not a one-to-one relationship between job satisfaction and productivity, it also seems clear that certain variables of worker satisfaction and dissatisfaction may lead to such industrial problems as turnover and absenteeism which;in turn; are related to productivity.

In the shipbuilding industry, the Kockums Shipyard of Sweden has published two well-known and controversial report~ known as “The Kockums Report” (1970) and “The Kockums Way” (1975) in which the authors describe how the company attempted to understand the variables of discontent and dissatisfaction and activily do something positive about them. Currently, the company-reports not only a significant” change toward greater worker job satisfaction but productivity as well.

The existant literature related to job satisfaction and job attitudes seemed to be of such prime importance that the investigators of this study deemed it advisable to design the study around the core issue of job satisfaction.

Job Commitment and Morale

Morale has been variously defined and is closely related to job satisfaction, the latter term used more frequently in recent years to define a similar process. Although the terms morale and job satisfaction may be used interchangeably, for the purposes of this study, job satisfaction is used to include all the multidimensional facets of a persons job directly or indirectly related to motivation. Morale may be considered, not as something which exists as a generalized

characteristic regardless of the job, but rather is the result of a particular work situation. To be even more specific, Yoder (1962) defines morale as the employee's feelings toward the kind of work he does, his fellow workers, his prestige and status, and his employer Morale is a combination or composite of these feelings, combined with reactions to his hours, earnings, supervision, the personnel policies and practices of the employer, and-other working conditions

The vast of studies related to morale will not be discussed here, but a sample of some of the result of the various morale studies indicate the following: the more monotonous the job, the lower the morale; the larger the work group, the lower. the morale; the greater the sense of group-membership, the higher the morale; the more human relations oriented the supervisor, the higher the morale; the more confidence the supervisor expresses in the worker, the higher the morale. Such results are important, but may demand additional interpretation because, morale, like job satisfaction is composed of multiple variables and it is important to understand the causal significance of these factors. If a worker experiences satisfaction with one aspect of his job, supervisors for example, but dissatisfaction with wages, it is important to know which factors or combinations of factors have the greatest causal impact on his morale.

The multiplicity of Studies related to job satisfaction and morale is not matched by studies of job commitment. Therefore, the relationships tend to be inferred rather than being genetically related. Furthermore, those factors which are important to the worker and may lead to job dedication are not necessarily the factors deemed important by management.

When investigators, for example, attempt to discover the answers to such questions as "How do workers in general feel about the various aspects of their work?" or What do employees want from their jobs?", a procedure frequently used requires employees to consider a list. of job characteristics and to rank them in order of their perceived importance. As an example, Siegal (1969) reports a study conducted by the National Industrial Conference Board. In this survey, each employee in six manufacturing plants was asked to go through a list of 71 morale factors and select the one that he felt was the most important. This process was repeated until the employee had made five selections. The results point up the difference in attitudes held by management and employees. A factor for example, like "information on the success or failure on the job" i.e. feedback, was ranked as quite important by workers but excluded from the top ten ranks by executives and labor leaders.

The following chart shows the ranks of the various factors as determined by employees, executives, and labor

leaders.

RANK	EMPLOYEES	EXPECTED BY EXECUTIVES	EXPECTED BY LABOR LEADERS
1	security	pay	pay
2	advancement	security	security
3	pay	vacations	hours
4	benefits	advancement	working condition
5	information on success or failure at job	working conditions	unions
6	type of work	company attitude	company attitude
7	vacation and holiday practices	type of work	handling of grievances
8	supervisor	benefits	vacations
9	profit sharing	supervisor	union-management relations
10	working conditions	hours	job evaluation programs

Even the factor of security which was deemed to be highly important by all three groups requires further interpretation. Some studies indicate that workers who are not confronted by the possibility of precipitous dismissal will regard security as not being of primary importance. Employees, however, who are now experiencing or who have in the past experienced real economic pinch and unemployment place a higher value upon job security, whatever their occupational level (Seigel, 1969).

One very important conclusion from such studies has been

that the neeeds of employees often are not well understood either by executives or by labor leaders. Although the relationship between need satisfaction and job commitment is not clear from direct studies in industry, the results from more general "motivation research is infers that when the worker perceives that" his needs are understood and that the company deems it important to do something about them, job commitment increases.

In another frequently quoted study, Herzberg, Mausner, and Snyderman (1959) interviewed 200 engineers and accountants at eleven different firms in the Pittsburgh area. The employees were asked to recall specific incidents in their recent experience which made. them feel either particularly good or particularly bad about their jobs. They were also asked to indicate what effects these incidents had on their attitudes and. performance and whether these effects were of short or long duration.

Herzberg, et al. found that the major factors keyed to good feelings were those associated with the actual tasks performed and the circumstances surrounding performance. Background factors such as money, security, supervision, or working conditions were not particularly important. When bad feelings occurred, however, it was usually associated with some disturbance of these background factors causing the employees to believe they were being treated unfairly.

The major factors were called motivators and the

background factors were called hygienic factors. A motivator is something which usually has an uplifting effect on attitudes or perform&ce. Hygienic factors produce no improvements, but serve to prevent losses of morale or efficiency.Pay, job security, and working conditions are hygienic factors.

Mills (1967) concurs with Herzberg, et al. He states that there are two sets of factors which operate on job satisfaction. The first set, which-includes working conditions, security, and supervision, is peripheral to the job itself and rarely leads to positive job satisfaction. The best that improvements in these factors can achieve is a reduction in dissatisfaction if it is present. Factors such as achievement, recognition, and responsibility, which are related to the performance of the work, generally lead to positive job satisfaction.

In reply to the Herzberg theory, Vroom "presents a dissenting view. Vroom (1964) feels that defensive processes within the individual account for the differences between stated sources of satisfaction and dissatisfaction. Persons may be more likely to attribute the causes of satisfaction to their own achievements and accomplishments on the job. On the other hand, they may be more likely to attribute their dissatisfaction not to personal inadequacies or deficiencies, but to factors in the work environment, i.e., obstacles presented by company policy or supervision.

The above studies and many others like them all seek to identify the specific factors which make up an index of job satisfaction, morale, or motivation. Some, agree on the factor and some do not, but that the factors may be of importance is underrated by none. The fact that the investigatiors do agree on either the relative importance of factors leading to high-employee motivation or their interaction, much less their relationship to such attributes as job commitient, crystallizes the need for the current, study.

Job Importance

Researchers and managers alike are becoming increasingly aware that the way jobs are designed is an important factor in determining the motivation, satisfaction and performance of employees at work. Guest (1965) quickly learned, by listening to employees (in the parking lot of the Vega Lordstown, Ohio assembly plant) the source of dissatisfaction for young workers "Its not the money" it pay's good but it's driving me crazy. I don't want more money. ● none of us do." "I do." said another "So I can quit quicker." Workers agreed that the source of their dissatisfaction was "the job" but found it hard to describe why.

Numerous studies have documented that simple, routine, non-challenging jobs often lead to high dissatisfaction, to increased absenteeism and turnover, and to substantial difficulties in effectively managing employees. A case in point is provided by a study of automobile workers in Detroit.

Kornhauser (1965) compared the reactions of a large number of employees who worked on low-level, routine, repetitive jobs with those of a demographically similar group of employees whose jobs were more complex and under more control of the workers-themselves. His findings showed that: 1) individuals who worked on low-level jobs tend to exhibit a diminishing amount of initiative regarding work activities; 2) they have a less active orientation toward life and toward their career and; 3) they show less personal ambition and less desire for personal growth. For example, one worker, when asked whether he would push harder to change the things in his life responded: "I quit pushing I guess. There was a time when I did. .in the past 8 to 10 years I sort of slowed down (he was 42 at the time); I guess I just got tired of trying-to get somewhere and you don't." Kornhauser concluded that factory employment, especially in routine production tasks gives evidence of extinguishing workers ambition, initiative and purposive direction toward life goals.

Walker (1950, 1954) told of the results in a factory when the company began a program of job enlargement. Workers had new tasks added to their jobs which used to be done by separate groups. Instead of having three different men on the job, one to set up, one to operate the machine, and one to inspect the product, the operator was allowed to do all

three jobs. The workers declared, their definite preference for the new arrangement, and they reported that many of their feelings of frustration and boredom disappeared. At the same time management was pleased because production remained the same, quality was improved, and fewer rejects were reported.

In response to such findings, there is a movement in industrial organizations to design jobs which provide more meaningful work. With the promise of greater motivation and higher productivity, jobs are being structured to include more" interesting content and greater opportunity for individual freedom & performing the job.

Hackman and Lawler (1971) suggest three job characteristics which they feel are salient to the" development of job enlargement programs. These characteristics are believed to achieve congruence between individual need satisfaction and organizational goal achievement. They are:

1. The job must allow a worker to feel Personally responsible for a meaningful Portion of his work. The worker must perceive job" accomplishments through his own efforts. He must feel responsible for the successes and failures that occur as a result of his own work. " The worker must also feel some control over his work outcomep. Research data reviewed by Walker and Guest (1952) strongly indicate that some workers are "very unhappy when they have no control over what happens on the job.

2. The jobs must Provide outcomes which are intrinsically meaningful. or otherwise experienced as worthwhile to the individual. Jobs can come to be experienced as meaningful to workers when they involve doing a whole piece of work and to the extent that they give employees the opportunity to use their valued skills and abilities (i.e. to be challenged). According to Turner and Lawrence (1965) a "whole piece" of work is characterized by a) a very clear cycle of closure; the job provides a distinct sense of beginning and ending a transformation process; b) high visibility of" the transformation process; and c) high visibility of the transformation in the finished product.

3. The job must provide feedback. Feedback can come from doing a task itself (designing a hull section) but also it can come from some other person; i.e. an esteemed co-worker or a supervisor. The major source of information on the motivational effects of feedback come from a series of studies conducted at General Electric (French, Kay, Meyer, 1966: Kay, Meyer, & French, 1965; Korman, 1966). The major findings of this research are summarized as follows: a) Criticism tends to have a negative impact on achievement of goals; b; Performance tends to improve when specific objectives are established; c) Defensiveness as a consequence of criticism results in inferior performance; d) Coaching is best done on a day by day basis and in direct association with specific acts, not once a year; e) Mutual goal setting by superior

and subordinate in establishing behavior yields positive results; f) Participation by subordinate in establishing his own performance goals yields favorable results and; g) Interviews intended primarily to improve performance should not deal with salary and promotion at the same time.

In a study, designed to test the above job characteristics, Hackman and Lawler (1971) found that for some workers these job qualities provide rewarding experiences by doing well on the job: The data suggest, moreover, that “doing well" has much more to do with high quality performance than with producing large quantities of work..

In summary;, the available research tends ’to suggest that job characteristics can ’and-often do have a substantial impact on worker motivation. Satisfaction with job content and the freedom to work on a self-sufficient, independent basis are viewed by many as crucial variables in the motivation to work.

Working Conditions and Benefits

Working” conditions have been described in this study as both compensatory (wages and benefits) and non-compensatory (physical and interfactional) . The non-compensatory factors are dealt with in other sections of this chapter, so the discussion in this section will be restricted to the vast number of studies related to wages and salaries and their motivational impact.

Although management has traditionally tended to

overemphasize the importance of pay as a determinant of job satisfaction, nevertheless, the money spent on extrinsic rewards (i.e., pay and promotion) represents one of the largest costs an industrial organization incurs. It is an investment which may or may not yield high returns in terms of employee satisfaction, motivation, and performance. The industrial organization has little control over the value their employees place on extrinsic rewards. How a company distributes its rewards has a very important influence on the behavior of individuals. Simply stated, organizations tend to motivate the kind of behavior they reward.

There is little question that pay can be used to motivate job performance. Theory and research suggest that for pay to motivate performance it must: 1) be valued as important and 2) it must be clearly tied to performance that is to be motivated (Hackman & Lawler, 1975)

Although the value an employee places on pay varies as a function of the strength of his needs at any given time (Herzberg, 1957; Lawler, 1971) , it remains clear that pay is important enough, in most instances, to be a significant motivator of behavior. We will focus, therefore, on the second condition which relates pay as a motivator of job performance.

The importance of knowing how pay and performance are related is confirmed by many research studies. In experimental studies, Atkinson (1958) and Kaufman (1962) found

higher levels of performance by subjects who were told that their earnings were contingent on the effectiveness of their performance. These findings were supported in an industrial setting by Georgopoulis, Mahoney "and Jones (1957). They found that workers who perceived higher productivity as a means to increase earnings performed more effectively than workers who did not perceive this relationship. Further, Campbell (1952) found that one of the major reasons for liner productivity in large groups, under group incentive plans; is that workers often do not perceive the relationship between pay and productivity as well as workers in small groups.At the..managerial level, Porter and Lawler (1966) . found that those managers who saw their pay as dependept ' upon their performance were the most-effective and highly motivated. The available research clearly demonstrates that productivity will increase when workers perceive that their pay outcomes is directly related to their performance.

Most industrial organizations do not do a very good job of tying pay to performance. Porter and Lawler (1965) found that pay was most often related to non-performance factors such as job level and seniority. Svetlik, Prien and Barrett (1964) found a negative relationship between the amount of salary a worker received and his performance as evaluated by his superiors. Meyer, Kay, and French (1965) found that managers raises are not closely related to what occurs in their performance appraisal sessions. The appareat failure

of many industrial organizations to tie pay closely to performance could indicate that pay is not always motivating job performance. “

Problems of perceived pay inequity are often created in industrial organizations and often cause worker dissatisfaction. A considerable amount of research suggests that satisfaction with pay is a function of how favorably a person’s earnings compare with the earnings of fellow employees. Sales (1958) found that the high dissatisfaction among skilled foundry workers was caused by relatively unskilled fellow workers receiving similar wages. At the management level, Porter & Lawler (1968) found a tendency for higher paid managers to be most satisfied when they perceive that their pay compares favorably with that of other managers with similar inputs.

According to Seigel (1969), the relative importance of the pay factor to workers seems to-be a function of the wage or salary” currently being received in relation to that being paid to. other employees in similar jobs or requiring similar training and experience. It is also a function of the employee’s needs relative to what he can purchase with the wage or salary he is receiving.

Individuals compare their own earnings with those of others by taking into account the factors of skill, seniority, and education which are believed to be the basis of pay. Dissatisfaction can occur when an individual finds, for

example, that another person who is similar in regard to the above determinants of pay is earning more than he is. The comparison would also b e dissonant if he compared himself to someone who was earning the same but was inferior in relation to the factors determining pay. On the other hand, if the individual compared himself to another who was earning the same and was similar on the dimensions related to pay, it would be expected that he would be satisfied.

Perceptions of pay inequity seems to also have an impact on work productivity. Research suggests that perceptions of either underpatment or overpayment will result in attempts by workers to adjust the quality and/or quantity of their output (Adams 1958, 1961, 1965) .

In a study designed to test the effects of equity theory on job satisfaction and performance, Pritchard and Dunnette (1970) found that employees under both “under” reward and . “over” reward conditions were less satisfied than those employees made to feel that they were equitably paid.

There are many pay systems which relate pay to performanc and clearly some are more effective than others. In a study of various incentive pay plans, Lawler (1971) found that individual incentive pay plans rate highest in tying pay to performance; group plans rate next highest and organization-wide plans rate lowest. He concluded that in group plans and organization wide plans an individual’s pay is not directly a function of his own behavior but influenced very strongly

by the behavior and performance of others with whom he works. Further studies indicate that bonus-type plans more effectively tie pay to performance than pay raise and salary increase plans. Under bonus-type plans a worker's pay may vary sharply in accordance with his performance which does not usually happen with salary increase plans.

In sum, when an individuals pay is tied to performance it increases his motivation and decreases the likelihood of his changing jobs if he is a good performer. Because pay plans differ in the degree to which they tie pay to performance their motivational effectiveness is also different. Bonus plans are superior to salary plans; individual plans superior to group plans; and group plans are superior to organization wide plans.

Research suggests that employees, particularly at the management level, favor their pay being based on their performance. Two studies have measured managers attitude toward how their pay should be determined, and both showed that managers prefer to have their pay based upon their performance (Andrews & Henery, 1963, Lawler, 1967) . Studies done among blue-collar workers to determine their preferences with respect to pay plans do not show overwhelming acceptance of merit-based plans (Hackman, 1975) . Lawler (1971) found that even though blue-collar workers show less acceptance for merit-based reward systems, workers do favor the idea.

Schwab (1974) studied the responses of approximately

300 skilled and semi-skilled male and female employees drawn from a workforce of 4000 in plants in the U.S. and Canada. The Minnesota Satisfaction Questionnaire and Job Description Index were used. The three pay systems used were:

1) individual piece rates
2) group incentive rates
3) hourly rates.

Schwab's results indicated that persons paid by work output were more highly motivated to perform while persons paid by time were most satisfied with their pay. He concluded that a single personnel practice (i.e. pay) may have a positive effect on motivation, but at the same time have a negative effect on satisfaction.

Worker Relationship With Other Workers

In addition to monetary rewards, the people we work with in an organization can also effect worker satisfaction, motivation and performance. Ultimately the effectiveness of the organization can be strongly influenced by the nature of the interpersonal activities of its workers.

Social psychologists have historically done most of the research on interaction and group dynamics. Industrial psychologists, however, realize that not only is social interaction highly rewarding to most people, but experiences with one's co-workers may be a major source of satisfaction in work.

Zaleznik, et al. (1958) found that people who were considered regular members of a work group were more satisfied than those who were not regular members. Further, workers who have restricted opportunity for communication because of excessive noise or for some other physical reason have a much higher rate of job turnover (Sawatsky, 1951). The physical features of a workers job often determine the kind of social relations that are possible among workers and between workers and supervisors. If, typically four or five men work at separate tasks on an assembly line, near enough to exchange a few words, but in non-related jobs, little interaction tends to take place and the group identification remains low.. The noise and tension of the line may also serve to impose severe limitations on social intercourse.

In contrast, if the job situation dictates that numerous workers are functionally dependent on all the others to get the job done, then a group identification tends to emerge. If handled effectively by the supervison, this frequently results in a vigorous team spirit which contributes both to personal satisfaction of the workers and to the efficiency of the team's members.

The work group has been shown to directly effect worker productivity. This was clearly indicated in a case study by' Newcomb (1954) . In this instance, the work group had established a norm of 50 units a day, but one particular * worker wanted to produce more than 50 units a day. Her

attempts to do so were successfully discouraged by her peers in a variety of ways. Her output finally fell below the 50 unit norm. Subsequently, the work group was broken up so she no longer worked with the same employees who had established and enforced the 50 unit norm. Her output soon doubled, providing striking evidence of the effect group norms have on a worker's behavior.

It has been established that the group can effect satisfaction as well as productivity. Walker and Guest (1952) found that for automobile assembly line workers, satisfaction was related to the kinds of opportunities for social 'interaction provided by the job. They reported that the fewer the interactions the lower the satisfaction. In addition, Vroom "(1964) found that work groups providing the greatest opportunity for social interaction tend to lower turnover, and absentee rates.

Groups can and do influence worker motivation and productivity because they have the power tc set norms which effect not only the quality but also the quantity of work produced. Groups also influence worker satisfaction to the extent that they satisfy his social needs. A group can increase an individual's performance by: 1) providing the worker with direct instruction; 2) providing feedback about job behavior and 3) serving as models for appropriate job behaviors.

Promotion

The possibility of promotion is a most effective motivator, partly because, like pay, it can serve many different needs. Also, as with pay, the more closely promotion is tied to performance the more effective a motivator it becomes. If a worker perceives that his performance has a direct impact on the possibility of promotion the greater the liklihood of increased production.

However, promotion does not serve the same function for all employees. This point is clearly made by some of the research on how individuals develop their careers. In a study of English blue-collar workers it was demonstrated that they see their careers quite differently than upward mobile managers (Goldthorpe, .1968). These blue-collar workers saw their relationship with their employers. as strictly a financial one in which they did the work in order. to be able to do other things off the job. Few were attracted to the idea of promotion; in fact most wanted only to continue to be paid well for doing the same job. only 10 percent had done anything to increase their chances for promotion. They reported wanting more leisure time and less stress in their lives. These workers did not see promotion as something that would give them need satisfaction.

Patchen (1960) studied the relationship between absences and promotional opportunities in a Canadian Oil Refinery. He found a higher frequency of absences among persons who

felt that they deserved to have been promoted compared with those who stated that they did not feel that way. Patchen also found significantly greater absences among individuals who perceived that their present promotional chances were less than they felt they should be compared to those who thought they were as good as they should be.

It has also been found that job satisfaction itself correlates positively with estimates of the likelihood of promotion. On the other hand, if people expecting a promotion do no-t get it, they will be discontented (Herzberg, et al, 1959) .

Another study has presented data from a limited sample of employees and suggests that in the United States, also, work may not be the central life interest" for ta least blue--collar workers. He concluded that "for almost three out of every four industrial workers studied, work and the work place are not central life interests." By contrast, for managerial and professional people, work is part of a career and promotion is of highest importance (Argyle, 1972).

In conclusion, if an industrial organization is to increase the effectiveness of its reward system, whether it be pay, promotion or any other reward, and at the same time increase worker-satisfaction, three things become necessary: 1) rewards must be tailored to the needs and desires of individual workers; i.e. what he wants from performing his job effectively; 2) superior performers must be given more

extrinsic rewards than inferior performers and 3) employees need to perceive and believe that high levels of performance will lead to high levels of rewards.

Supervisor-Worker Relationships

In an industrial work environment, the leader or supervisor exerts the greatest impact on the individual worker. While there is a plethora of definitions of leadership (Gibb, 1969; Fiedler, 1971) this review will focus on major issues involved in the understanding of how leaders can behave in industrial. organizations to increase the effectiveness of the individual worker and of the work group for which they are responsiple

Much of the early research on leadership effectiveness was dominated by the "trait versus situation" controversy. It is generally concluded that to understand effective leadership it is necessary not only to understand the leader and his personal characteristics but also to understand the situation in which. leadership occurs (Hackman & Lawler, 1975) .

Leadership studies initiated in the 1950's attempted to identify the behavioral styles of leaders in an effort to understand how behavioral characteristics of leaders effect subordinates. Numerous dimensions have been proposed including authoritarian versus democratic, employee-centered versus production centered, and consideration versus initiation of structure.

Denhardt (1970) investigated the effects of leadership style on worker involvement, fulfillment, and deference to authority in two small companies engaged in, similar businesses. The leadership in each company was of a different style, one described as being more democratic and less authoritarian than the other. Workers in the democratic company were found to a) be more involved in company affairs, b) express greater fulfillment in their work, c) find work more fulfilling than outside organizations, and d) show greater deference to legitimate authority.

Evidence suggests that under most conditions motivation, satisfaction. and performance are highest when democratic leadership is practiced (Lawler, 1971) . Coch and French (1948) found that democratic leadership, by allowing workers more freedom in determining the specific form and content of their work, significantly increased productivity. Morse and. Reimer (1956) compared satisfaction scores for authoritarian and democratic groups and found that the democratic groups experienced higher satisfaction. Marrow, Bower, and Seashore (1967) report the efforts of a company to change the leadership style of managers in a newly acquired division. When a more participative leadership style was put. into effect satisfaction increased as well as employee effectiveness. A follow up study several years later revealed that democratic leadership was still preferred and workers continued to show high levels of satisfaction. Wickert (1951) and

Ross and zander (1957) found that under democratic leadership worker absenteeism and turnover rates are lower.

Other research has shown that under some condition democratic leadership does not lead to higher motivation, satisfaction and performance. Vroom (1964) and Argyr'is (1953) found the authoritarian style to be superior to the democratic style of leadership. They reasoned, workers unprepared for democratic- group action, because of a lack of prior exposure and/or training for such leadership, seem to need the kinds of direction afforded by the authoritarian leadership style.

Participative decision making as a leadership ,strategy has been advocated as a means of improving both performance and worker satisfaction (Likert, 1961; Lowen, 1968; McGregor, 1966) Alutto and Acito (1975) found that non-professional employees who desired but were not allowed. participation in decision making were found to 1) be less committed to their current job and employer; 2) experience greater job-rekated tension; and 3) experience loyer satisfaction with work, supervision, pay and promotion.

Rub, Johnson and Scontrino (1973) investigated the effects that the Scanlon plan had on job attitudes. The Scanlon plan provides opportunities for broad worker participation in decision making through a suggestion plan which allows everyone to benefit materially if a suggestion increases productivity. Results indicate that the more positive were the worker's attitudes toward the Scanlon plan and the greater were the

employees and managements degree of commitment to participative management, the greater was its success and the more it contributed to high job involvement, motivational and comp identification.

Vroom (1964)-in reviewing participation in decision making studies found a substantial basis for the belief that productivity is increased by participative decision making. It should be noted that not all findings are consistent with this generalization. It seems that participating in decision making has the potential to increase motivation for employees who 1) have strong needs for independence," competence, and;self-esteem; 2) are members of work groups that favor participation and; 3) value the social rewards that groups can offer. Further, higher-quality decisions are made when 1) employees have relevant information, 2) time is available for adequate discussion; and 3) the self interest of the employees does not conflict directly with the interests of the organization (Lawler, 1971)

It is frequently suggested that consideration by a supervisor for the needs or feelings of his subordinates has a positive effect on motivation, satisfaction, and performance. Davis (1962) found that employee-oriented supervision tends to result in increased productivity, motivation, and work satisfaction. In a study of railroad workers Maccoby, Gurin and Flood (1951) found that the men in high productivity groups more frequently described their

supervisors as taking a personal interest in them, helping in training them for better jobs, and being less punitive than men in low productivity sections. Korman (1966) has also found consideration to correlate strongly with productivity. Other more recent studies (Wagner', 1965; and House, Filley" & Kerr, 1971) have found similar consideration/ satisfaction relationships.

In reviewing the literature on leadership it becomes clear that it is ultimately impossible to draw up a set of behavioral specifications for the "perfect" leader or supervisor in an industrial setting. However, effective leadership does seem to be characterized by: 1) an awareness of the factors which influence the interpersonal end work behavior"of group members; 2) the capability to diagnose, with sensitivity, those factors that are imparing the effectiveness of the group at any given time and 3) a willingness to share selectively with group members responsibility for making those decisions and performing those leadership acts which are necessary to keep the group moving toward its goal (Hackman & Lawler, 1975).

SAMPLE MOTIVATIONAL PROGRAMS IN INDUSTRIAL ORGANIZATIONS

Many industrial organizations have attempted to develop formal motivational programs based on their understanding of the salient aspects influencing worker motivation. While there are many titles for these programs, most can be

classified into one of three categories: 1) positive reinforcement programs based on the premise that behavior is determined by its consequences; 2) task structure of job enrichment programs which assume that a job workers find intrinsically rewarding and challenging will motivate the worker to increase his level of performance; and 3) climate or organizational development programs which are based on the theory that the organizational climate and the attitude of fellow employees can enhance or be detrimental to employee performance.

. Each of these worker motivational programs operates on the premise that some form of change in the organization can lead to an improvement in employee performance. Each is designed not only to improve a current industrial situation but is also designed to anticipate and prevent future problems with worker discontent.

Each program is examined in relation to its theoretical assumptions, its program development, and its reported effectiveness.

Positive Reinforcement Program

Theoretical Background

Positive reinforcement programs are founded on the premise that workers perform in the way they find most rewarding and that management can improve their performance by providing them with the proper rewards.

The theoretical underpinnings for this type of motivational program are based in learning principles set forth by Thorndike (1911) and Skinner (1953). Thorndike's Law of Effect simply states that behavior viewed as leading to reward tends to be learned and repeated; behavior that does not produce a reward"or is punished tends not to be repeated. Any event that operates in this way, so as to change the probability of a particular behavior is said to be reinforcing.

Skinner and his followers (Hamner, 1974; Nerd, 1969; Weird, 1972; Whyte, 1972) "contend that the only tool needed for worker motivation is the presence or absence of positive reinforcers. This means that a reinforcement motivational program is results-oriented rather than process oriented. That is, it does not focus on worker attitudes as the cause of behavior but rather on an analysis of the workers situation itself, focusing on the reward contingencies which seemingly cause a worker to act the way he does.

Stages in Program Development

Positive Reinforcement programs as currently implemented in,industry generally involve four stages: 1) To define the behavioral aspects of performance and to do a performance audit; i.e., to specifically determine and clearly state levels of performance. While goals are set by a manager or supervisor, it is important that they are accepted by the employee. 2) To develop and set specific goals for each worker which are

reasonable and set somewhere between “where a worker is at" (as defined by the performance audit) and some ideal. It is important that these goals be accepted by employees. 3) To allow the worker to keep a record of his or her own performance. This process of self-feedback.is believed to maintain a continuous schedule of reinforcement. 4) To provide positive reinforcement for good performance (as determined by the performance audit and the goals set) Since the worker knows the areas of his own deficiencies) . there is no reason for the supervisor to criticize the employee. In other words, negative. feedback is self-induced, whereas positive feedback comes from both internal and external reward sources.

Results of Positive Reinforcement Programs

Companies which claim to be implementing positive reinforcement motivational programs include Emery Air Freight, Questor Corporation, Ford Motor Company, American Can, United Airlines, Bethlehem Steel, IT&T, Westinghouse, and Wheeling-Pittsburgh Steel Corporation (Business Week Dec. 2, 1972)

Because positive reinforcement programs are relatively new in an industrial setting (most have begun since 1968) few statements of their relative effectiveness have been reported and no systematic study has, as yet, been completed. However, some companies are claiming success with their programs.

For example, in an attempt to reduce the number of

employees who constantly violated plant rules, General Motors initiated a plan in one of its plants that gave employees opportunities to improve or clear their records by going through varying periods of time without committing further violations. They credited this positive reinforcement program with reducing the number of production standard grievances by 70 percent during the same period of time o (Schotters, 1973)

Gamboa and Pedalino (1973) describe a company which used a lottery to solve the problem of employee absenteeism. Each day an employee came to work and was on time, he was allowed to choose a card from a deck of playing cards. At the end of a five-day week' he had five cards or a normal poker hand. The highest hand in each department won $20.00 and all fulltime employees who worked 50 days straight had their names placed in a lottery from which two $50.00 prizes were drawn. Absenteeism dropped 18 percent.

One of the most publicized application of operant techniques carried out in an industrial work organization is at Emery Air Freight Corporation, under the direction of Edward Feeney. Each manager receives two elaborate programmed instruction workbooks prepared in-house and geared to specific work situations. One deals with recognition and rewards, the other with feedback. Under recognition and rewards, the workbook enumerates no less than 150 kinds, ranging from a smile and a nod to encouragement, to "Let me buy you a cup

of coffee, to detailed praise for a job well done. Supervisors are urged to supply praise and recognition at least twice a week during the early weeks or months of shaping behavior. They have found at Emery that, at least in the early days of shaping behavior, it is difficult to determine whether providing praise and recognition or withholding censure and criticism deserves the most credit for the improvement in performance. The switchover from censure to praise has resulted in instant, almost miraculous results. For. the Emery Corporation these results are translated into a direct saving of over $3 million in the past three years . and indirectly with pushing 1973 sales. over we 160 million mark (Organizational Dynamics, 1973)

In addition to Emery Air Freight, other companies are experiencing improvements as a result of initiating similar positive reinforcement programs. Michigan Bell's Detroit office credits their program with reducing absenteeism from 11 percent to 6.5 percent in one group of employees, and from 3.3 percent to 2.6 percent for all employees. The Wheeling Pittsburgh Corporation, according to Business Week Magazine (Dec. 2, 1972) , is saving $200,000 a month in scrap cost as a result of its feedback program. Reports such as these seem to demonstrate the feasibility of behavior modification through positive reinforcement and its ability to improve worker performance.

Job Enrichment Program

Theoretical Background

According to Luthans (1973) job enrichment (or job enlargement) as it is currently practiced in industry is a direct outgrowth of Herzberg's two factor theory of motivation (Herzberg, 1968). It is therefore based on the assumption that in order to motivate performance of employees, the job itself must provide opportunities for achievement, recognition, responsibility, advancement and growth in cmpetence. Herzberg insists that real motivation will -result only when the job has the potential to satisfy these upper-level needs which translate into job enrichment.

Vroom (1964)' offers another theoretical explanation of why job enrichment will lead. to higher levels of performance. His is an "internal state" theory called "expectancy theory. While the details of this theory are beyond the scope of this report, this theory basically says that an increase in complexity of task design is perceived by the worker as leading to an intrinsic reward.

Unfortunately, a theory has not yet been elaborated to specify how worker characteristics interact with job characteristic. Most do, however, agree on the elements necessary for effective job enlargement. These elements include: 1) Individuals should be given maximum freedom to control their work and develop their skills; 2) Jobs should be designed to give each person a series of tasks which are varied,

challenging and meaningful in terms of the end product; and 3) The status differential which has separated supervisors and employees should be replaced by a team concept with an emphasis on shared goals (Levitan & Johnson, 1973)

Stages in Program Development

Limited experience has not yet produced a how to do to manual for industrial organizations contemplating job enlargement. Rush (1971), drawing from the research on job design and the experience of organizations that have tried job enlargement for motivation, does suggest some general guidelines They are:

1. Analyze all Possibilities". Investigate job design and motivational possibilities throughout the organization. Usually the persons holding the "problem". jobs, as well as their immediate supervisors, are involved in analyzing the situation. They are closest to the job and can provide information that management would otherwise not have access to.

2. Work on a Problem. Begin by selecting a job or jobs where there is a lack of productivity, efficiency, or morale.

3. Formulate a Pilot study. Starting with an experimental or pilot project makes it easier to observe, measure and learn.

4. Assess employee motivation. Determine as accurately and objectively as possible the seeds and motivations of the

employees whose jobs are to be affected.

5. Communication. Share with employees their ideas, as well as managements ideas for job change and implementation of those changes.

6. Build feedback mechanisms into the job. Since achievement and recognition are important variables in motivation, it is essential that a means of feedback be developed to measure progress in performing the new job.

Result of Job Enrichment Programs

There' are literally scores of companies today involved, to some extent, in job enrichment. These companies include Texas "Instruments, Corning Glass, Maytag, Buick, Exxon, Volvo and Kockums Shipyards in Sweden, -to name a few (Johnson, 1974). In 1966, Reif and Schoderbek found that 41 of 210 industrial companies surveyed had used job enrichment.

As far back as 1950, Walker reported a successful job enrichment program at IBM. More recently Ford (1969) reported. that after job enrichment was installed at"AT&T there was a 27 percent reduction in the termination rate and an esttiated cost savings of $588,000 over a twelve month period. In twelve districts of AT&T where the program was tried, resignation and dismissals dropped by 14 percent which could mean an annual savings of $19 million in operating costs (Janson, 1970).

Motorola found that bench (individual) assembly required 25 percent more workers in addition to increased training

time in order to implement a job enrichment program. They reported that the higher cost in wages was offset by greater productivity, less need for inspection, higher quality of product, and lower work costs (Business Week, Sept. 4, 1970) The Maytag Company found that greater flexibility in terms of production scheduling was one of the major advantages of job enrichment. They reported they could add or subtract work stations from their assembly-line production without affecting production of other workers (Stewart, 1967).

- Texas Instruments gave full responsibility for janitorial services to the workers involved. The men met to decide how the work would be divided and to set up schedules and establish standards. As result of this job enrichment effort, manpower needs declined from 120 to 71, cleanliness improved, and turnover was reduced from 100"percent to 10 percent (Herrick, 1971) . This exam-pie illustrates an application of job enrichment concepts to low-skill jobs. Its success demonstrates that the- potential power of these concepts is not limited to committed achievers who work in higher skilled jobs.

Organizational Climate and Development Program

Theoretical. Background

Organizational Development is based less on theory than the two programs previously discussed. The overall OD approach is an extension of the use of sensitivity training methods which evolved primarily from the field theory and group

dynamics Concepts of Lewin (1944, 1951, 1952) and RogerS (1942). Sensitivity training attempts to make the individual " within the group more aware of himself and,his impact on others.

Other theorists who have contributed to the introduction of Organizational Development as it is practiced in industry , today include Argyris (1962) , Bennis (1966) Beck (1969) Burke (1971) , Blake & Mouton (1967) and Greiner (1967)

Stages in Program Development

Because Organizational Development is an evolving field, it is difficult to describe-a "typical" program. However, the general Shilarities in most approaches to OD has led Strauss (1973) to outline various stages in an OD program.

The first stage is a diagnostic phase of planned organizational change. This stage involves gathering data about the state of operations, interpersonal attitudes and behavior. T-group sessions may be held to develop problem-solving skills, examine interpersonal relations and the basic attitude of the employees. One purpose of this stage is to improve the way people work together. It involves changing basic attitudes of both superiors and subordinates. Also it involves opening up communication channels to allow all employees a larger voice in how they do their jobs.

The second stage of the OD program is an action stage of planned organizational change. After a 'period of trust

has been established, work groups begin to establish ways to solve the problems they identified in the first stage. This stage may involve all the steps used ,in the positive reinforcement program and the job enrichment program; i.e. team performance, goal setting, task redesign and self-monitoring. ‘

The third and final stage” involves work teams’ evaluation of their progress. Group members continue to search for new problems and to offer new solutions. The third stage is a proactive stage; the purpose is to maintain the healthy climate established in the first two stages.

Results of Organizational Development Programs

Examples of companies using OD as a motivation plan include: Union Carbide, Royal Dutch Shell Group, Esso, US Steel, Kaiser Steel, Corning Glass and General Motors (Strauss, 1973) .

Many companies are reporting evidence that OD motivation programs have improved worker satisfaction and increased company profits. Kaiser Steel credits its OD program with increasing productivity by 32 percent and thereby keeping the plant open after it had scheduled to close due to low productivity and loss in profits (Schein, 1971) .

General Motors initiated an Organizational Development program in 1969 because of a dramatic rise in absenteseism and turnover rate. One of their Oldsmobile engine plants put several foremen and their hourly workers through a

group problem-solving (team-building) program. Resulting from this program were several suggestions by the group for improving absenteeism and turnover which were accepted by the plant management. They credit this program with reducing total absenteeism in the plant during the first five months of 1971 by 6 percent, while absenteeism in the rest of Oldsmobile went up by 11 percent. Turnover was down by 38 percent compared to 14 percent for the rest of Oldsmobile (Schotters, 1972)

The Chassis Department of the General Motors Assembly Line Division began an (2D program in 1971. It involved 104 hourly employees and four foremen. It was designed to improve communications and attitudes. General Motors reports that this program resulted in a 50 percent decrease in grievances filed per month, housekeeping improved and foremen became more willing to make decisions on problems without relying on higher supervision.

Landen and Carlson (1973) state clearly the importance of organizational development at General Motors when they say: “one vital point can be “concluded from these and a variety of other programs now underway in the corporation; we are only beginning to touch the surface of the deep reservoir of untapped human potential among all General Motors employees. Employee motivation is increasingly regarded as a core issue in the future of General Motors.”

Summary

The vast amount of literature related to motivation in inadustry testifies to the importance of the, subject for both researcher and practitioner. This *review* has sampled those aspects of the voluminous research which tend to be-most pertinent to this research study, to shipbuilding, and to current practice in general industry. Although certain conclusions have been drawn throughout this review, the conclusions which are derived from one company or industry are-not necessarily applicable to other industrial settings without assessing the local conditions of the latter groups. The results of the research and experience of other companies is valuable, but must be applied in terms of the individual and unique conditions of the local shipyard.

CHAPTER III

RESULTS

The purposes of this study relate to gaining a more precise understanding of the motivational methods utilized at various shipyards around the country with the ultimate objective to improve such methods and, in turn, productivity. The researcheis for this study determined that the initial focal point to accomplish those purposes should be to evaluate the degrees of job satisfaction in the shipyard industry and designed the study toward accomplishing that major objective. Accordingly the results are organiaed around the prime category of job satisfaction with all other categories of analysis contributing there to The various categories have no intrinsic meaning and there is overlapping between categories, but they are used in an attempt to organize the handling of a vast quantity of data. The data categories, in addition to the prime category of job satisfaction, are as follows: a) job commitment and morale; b) job importance, c) working conditions and benefits, d) perceptions of other workers, e) promotions, and 5) worker-supervisor relationships.

The results of this study are presented in both narrative and tabular form for all interview data for ten companies. Although eleven companies participated in the study, the results included here represent only ten companies since the procedures used were revised after the first shipyard site

visitation and the results of the first visitation will not be included in this report. Again, in order to facilitate the evaluation of a vast quantity of data, the results are organized according to the following groups: a) hourly production workers; b) production management; c) support services management: d) professional support services personnel; and e) non-professional support personnel. These results are presented in terms of the composite of all workers in the ten companies according to the above groups, and also by a comparison of workers company by company.

All data are presented anonymously in terms of person and company. Individual companies may obtain. data related to their own *company,* but not data relating to other shipyards.

Hourly Production Workers

The following results represent all of the hourly production worker interview responses grouped together from the 10 local shipyards. The number of hourly workers interviewed totalled 620., reflecting a sample of all jobs held by hourly production workers. Ninety-seven percent of the sample are male, 75 percent are married and 93 percent have no supervisory responsibilities. Five percent of the sample are under age 20 and five percent are over age 60 with the remaining sample

representing all ages in between. Further, the time of service was evenly distributed so that the total sample includes workers who have worked less than three months to workers who have spent all of their working career in the same shipyard.

Job Satisfaction

Job satisfaction among production workers in all ten shipyards is high. As indicated in Table 1, more than 60 percent of the hourly workers reported high job satisfaction which in terms of the total interview process is a surprising result. Much of the time of the interview sessions with the workers was involved with their complaints and negative comments related to company, supervision or job. When it came to a final evaluation, however, most interviewees reported high job satisfaction.

Table 1

Job Satisfaction
Production Workers
All Companies Combined N=620

Question	Response	Percent
What is your overall job satisfaction?	Good	65%
	Fair	29
	Poor	6
	Don't Know	--

Job Commitment and Morale

What was found to be true of job satisfaction is also true of worker morale. Most workers not only rated their personal morale to be high and better than it was in the past, but they perceived their morale to be higher than that of their peers. Job commitment, like job satisfaction, is

also high as indicated by the high percentage of workers who intend to remain with the company rather than seek jobs elsewhere, the fewer than half of the hourly workers who would prefer a job other than the one which they currently hold, the almost 75 percent of the workers who would choose the same company again if looking for a job, approximately the same number who have the opportunity on the job to do the kind of work they like to do, and the fewer than one-half of the workers who have ever seriously considered quitting their jobs.

One additional significant segment of data emanates from the workers comments as they answered the questions related to what workers dislike most about the company. Twenty-nine percent of the workers spontaneously indicated that there was nothing they disliked about the company, approximately one-fourth of the workers indicated they had no serious gripe with the company and, when asked why most people quit their jobs, almost a third of the responses related to low pay rather than factors related to the job itself or the shipyard.

The data clearly indicate that both job satisfaction and morale are high for the majority of production workers. With those workers who complained about their company, the causes tend to be varied. The areas where improvements tend to be most needed from the production workers perceptions are as follows: higher pay: physical working conditions, from poor ventilation to inadequate safety conditions; poor quality

Table 2

Job Commitment and Morale
Production Workers
All Companies Combined N=620

Question	Response	Percent
Does your job give you a chance to do what you really like to do?	***Yes***	70%;
	Sometimes	11
	No	19
	Don't mow	--
Is there any other job you would rather do that you have the skill to do?	Yes	36%
	Maybe	**3**
	No	59
	Don't know	**2**
If beginning again the same job would you choose this company?	Y e s	**7 2 %**
	Maybe	
	No	18
	Don't know	4
Have you ever thought of quiting your job?	***Yes***	3 9 %
	Sometimes	
	No	55
	Don't know	1
Would you guess you'll-be working 1 year, 2 years. 5 years, more than 5 years?	**1** year or less	14%
	2	10
	5 or more	6 7
	Don't now	10
How is your" morale at present?	Good	67%
	F a i r	23
	Poor	9
	Don't mow	. -
Is it better or worse than it use to be?	Better	58%
	Same	16
	Worse	26
	Don't know	- -

and quantity of machines, equipment and materials; inadequate planning between various departments, crafts, shops and shifts; the poor company attitude toward the workers and inadequate supervision.

Job Importance

With hourly production workers, shipbuilding was selected as a place of employment primarily because, at a shipyard, a job was available. Although a small percentage of workers choose shipbuilding because of a love of the sea, or family tradition, or patriotic reasons, most workers took a job at the shipyard for such unromantic reasons as job availability, pay, friends or relatives recommendations or appropriate job training or experience. There w-as no more positive affective worker identification with obtaining a job in a shipyard,than in comparable industries.

Nearly all workers, however, deemed shipbuilding to be an important or essential industry, primarily for national defense, for the national economy, for transportation of goods and for providing jobs for workers. In addition, 94% of the workers believed that their own job was important or necessary to some aspect of. constructing the ship or by facilitating or supporting construction.

In spite of the high importance the worker considers both the shipbuilding industry and his own job to be in the process of constructing ships, only about one-half of the workers indicate that the company in turn gives them the

feeling that they are important. While about one-fifth of the workers indicate that they get recognition or commendation from their immediate superiors, only a few stated that they get recognition or commendation from the company or its management. A larger group believes the company has no interest in them as persons, is unaware of what they do, or gives recognition to them for a job well done. These results tend to be in marked contrast to those which show the great majority of workers who indicate that they believe their job to be important.

Table 3

Job Importance
Production Workers
All Companies Combined N=62

Question	Response	Percent
DO you feel that shipbuilding is important?	Yes	96%
	Maybe	3
	so	1
	Don't know	- -
Do you feel that your "particular job is important?	Yes	94%
	Sometimes	4
	No	2
	Don't Know	
How does your family feel about your job?	Good	63%
	Fair	20
	Poor	13
	Don't Know	4
Does the company give you a feeling that you are important in getting the job done?	Yes	54%
	Sometimes	14
	No	30
	Don't now	2
Is there any way you can influence the company in any important way?	Yes	19%
	Sometimes	8
	No	66
	Don't now	7

When,hourly production workers are asked whether they believe they can influence the company in any important ways fewer than 20 percent of the workers responded positively. Workers in this group indicate that they believe their influence was important to the company in the way they performed their job, through their supervisor or foreman, through.the company suggestion system, or through the union. The 64 percent of the workers who indicated that they could not influence the company in perceptible ways cited that it was futile to try, that the company didn't care or was too big or set in its ways, or that their low position or lack of knowledge prohibited their influence.

The data clearly indicate that the huge majority of workers believe "that shipbuilding is an important or essential industry in this country and that they personally are doing an important job in getting ships constructed. In sharp contrast, however, the average worker does not believe" that the company considers him to be important in getting the job done. If the worker perception is accurate, does such an attitude lead to optimal production; if the perception is inaccurate, how can the company communication process be improved to reflect the accurate company attitude?

Working Conditions and Benefits

The workers attitude toward their working conditions significantly, depending on the type of condition being

evaluated, Most workers believe the medical insurance program, the vacation policy and the working hours to be positive factors. There is a mixed opinion related to wages. Some workers believe the pay to be superior to that in some other comparable industries, other workers believe the pay to-be average while still others believe the pay to be low and not comparable to *other* companies or construction workers. At a more significant negative level, both the retirement and sick leave programs at most companies are deemed to be inadequate.

The most common spontaneous complaint among production workers related to working conditions concerned the planning, scheduling coordination and communication between crafts and/or shifts, production workers and support services workers, planners and producers or various other workeks and groups within the yard (Table **5)** More than 300 different complaints were spontaneously made by the workers related to the coordination effort. The second greatest number of complaints were related to inadequate equipment and materials. A third common complaint of the workers related to some . aspect of the. physical working environment under which they worked. Safety was the physical factor most frequently discussed but about as many believed the company to be safety conscious and workig on improving safety conditions as believed the yard to be negligent related to safety. More frequent complaints related to the immediate work environment

Table 4

Working Conditions and Benefits: Compensatory
Production Workers
All Companies Combined N=620

Condition/Benefit	Response	Percent
Medical Insurance	Good	57%
	Fair	18
	Poor	14
	Don't know	11
Vacations	Good	51%
	Fair	20
	Poor	26
	Don't know	3
Wages	Good	42%
	Fair	26
	Poor	32
	Don't Know	-
Sick Leave	Good	22%
	Fair	8
	Poor	52
	Don't Know	19
Retirement	Good	17%
	Fair	15
	Poor	36
	Don't Know	32
Working Hours	Good	86%
	Fair	6
	Poor	8
	Don,t know	--
Safety	Good	40%
	Fair	25
	Poor	35
	Don't Know	--

*Item not "compensatory, but included for additional informatio

such as job location, ventilation, house-cleaning. weather and other related physical conditions.

AnOther frequently mentioned complaint area had to do with the company climate or atmosphere which primarily reflects the negative attitudes management. is perceived to have towards the workers, such as perceived maltreatment, or lack of interest or concern by the company or its management toward the workers. In smaller proportions, the workers complained about non-job plant facilities such as inadequate eating facilities or dirty washrooms, and company rules and regulations such as those related to such diverse factors as. overtime, safety glasses or sick leave.

Table 5

Complaints About Working Conditions
Hourly Production Workers
A11 Companies Combined N=620

-Volunteered Complaint	. Number
Plant Physical Conditions ‘	245
Scheduling Coordination, Communication	315
Inadequate Equipment or Materials	289
Company Atmosphere	115
Non-Job Plant Facilities	67
Company Rules and Regulations	55
Unspecified	46

Note: The total number of complaints exceeds 620, because . many workers volunteered several different complaints ***or*** volunteered the same complaint to several different questions.

In sum, most every aspect of the working environment provided a source of grievance by at least some of the hourly production workers. The most serious complaints, however, were related on the physical side to those factors of inadequate safety, ineffectual machines, or poor worker facilities, and to human factors, such as poor coordination and planning, and company attitudes reflecting a perceived disinterest in the workers welfare. Most of the areas of complaints, both real or misperceived, tend to be renedial if the local companies deem it important enough to change the conditions related to the grievance and/or the communication process related to the clarification of the issues.

Perceptions of Other Workers

The attitude of most workers related to their co-workers is positive. In fact, one of the most significant factors

Table 6

Workers' Perceptions of Other Workers
Production Workers
All Companies Combined N=620

Question	Response	Percent
How do you feel about the guys you work with?	Good	90%
	Fair	8
	Poor	2
	Don't know	--
How hard do you feel the guys around here work?	Hard	54A
	Medium	34
	Lax	12
	Don't know	--

in the whole study is the high regard most workers have for their peers, including both technical competence and positive interpersonal relationships. On,the other hand, only about one-half of the workers believed that the majority of their fellow workers worked sufficiently hard to do the job although, generally speaking, the closer the proximity the higher the worker rated his peers. That is, most workers opined that they worked harder than their peers, that their immediate peers worked harder than workers in most other departments and especially harder than in . certain support services.

Promotions

Approximately 60 percent of the workers indicated that they would like to be promoted and gave comments varying from “doesn’t everyone want promotion?” to an interest in more money or a more skilled or supervisory position. on the other hand; many workers were uninterested in promotion, indicating that itwas “too much of a hassle” or toc much pressure. or that the pay was insufficient, or a preference for their own job,or that they were too old or too close to retirement.

While the majority of workers’ experienced a desire to be promoted, only about 35 percent of the workers indicated that they believed that they would be promoted. The reasons stated for not anticipating promotion include the following: too few openings, favoritism, doing too good a job currently

and not enough training or seniority.

The workers have quite divergent opinions related to the fairness of the promotion process. About as many workers consider the process to be fair as those who consider it Unfair, while more-than 10 percent were-fifamiliar with the promotion policy of the company or had no opinion of it. With those workers who considered the policy to be a fair one, they mentioned as reasons the use of merit and the good quality of the people who have been promoted. Those who consider the policy unfair indicated that there was too much emphasis on seniority, minorities were given preference, outsiders were brought in and qualified persons who had served the company for a long time had not been promated.

-Table 7

Promotion
Production Workers
A1l Companies Combined N=620

Question	Response .	Percent
Do you have any interest in being promoted?	Yes	61%
	Sometimes	
	No	3:%
	Don’t know	--
Do you think you will get promoted?	Yes	35%
	Sometimes	13
	No	43
	Don’t know	9
Do you think the promotion process is fair?	Yes	38%
	Sometimes	16
	No	34
	Don’t know	12

The, most significant trends related to promotion are the number of persons interested in promotion, the discrepancy between the desire to be promoted and the expectancy of promotion, and the number of persons who do not know the company promotion policy or process.

Supervisor Relationships .

Most workers, approximately 75 percent, have a favorable relationship with their immediate supervisor. Among the positive factors most frequently mentioned about their supervisor was his technical competence, his fair treatment of workers, his good human relationships, his allowing workers to do their jobs and. his being helpful. No negative factors were consistently mentioned though the range of comments' was broad from "overcritical" to "shows favoritism" to "inadequate leader and communicator" to "technically incompetent ."

While the relationships with the immediate supervisor were generally positive, this was not, in general, achieved by the use of positive reinforcement. More workers perceived their boss to use negative reinforcement (criticizing a poor job) rather than positive reinforcement (complimenting a good job), although many workers perceive their supervisor to use both praise and reproof in realistic balance.

Furthermore, the immediate supervisor is the company representative most likely to be contacted by workers when they have a problem. About 70 percent of the workers would

first go to their immediate supervisor with a problem compared to 10 percent who would take their problems to the union representative and 5 percent who would go to a company worker or management representative (e.g. personnel department) . All of the data indicate that the worker's relationship with his immediate supervisor not only is a key one but that, for a significant majority of the workers, it is also a positive. relationship. Further, the worker's relationship with the immediate supervisor tends to be better than the workers' opinion of and relationship with higher management.

. Table 8

'Supervisor-Worker Relationships
Production Workers
All Companies Combined 'N=620

Question	Response	Percent
How do you feel about your boss as a supervisor?	Good	78%
	Fair	1 4
	Poor	8
	Don't Know	
Does your boss-tell you when he feels you have done a good job?	Yes	61%
	Sometimes	12
	No	27
	Don't Know	
Does your boss tell you when he feels you have done a bad.job?	Yes	71%
	Sometimes	
	No	
	Don't Know	5
Does it go anywhere?	Yes	71%
	Sometimes	9
	No	10
	Don't Know	10

Production Management

Production management is defined for the purposes of data analysis as all managers directly related to production below the level of those directly reporting to the president. These managers are further divided into middle production management and foremen, defined as the first line supervisor directing the production workers, who are herein classified as lower production management. The middle production management group, which includes managers at all middle levels, totaled 98, and. the lower management group totaled 115. The analysis of data related to production management follows the same-procedure utilized with the hourly production workers.

Job Satisfaction

Job satisfaction among middle and lower production management is high, with approximately 85 percent of both groups indicating high job satisfaction. When this figure is compared with the 65 percent high job satisfaction indicated by hourly production workers, it is clear that over 20 percent more of the production managers have high job satisfaction than is true of production workers.

Table 9

Job Satisfaction
Production Management
All Companies Combined

Question	Response	Middle Mngt. N=98 Percent	Lower Mngt. N=115 Percent
Considering everything, on a scale from 1 to 5, rate your overall job satisfaction.	Good	85%	84%
	Average	12	16
	Poor	3	--
	Don't Know	--	--

Job Commitment and Morale

As indicated in Table 10, 87 percent of both middle and lower production managers like their jobs. The most frequent reasons given are first? job security, followed in order of frequency, having an interesting or challenging job, good pay and benefits, and appreciating the people with whom they work.

Approximately one-half of the managers in both groups had considered quitting their jobs at some time in the past, and only 59 pecent of middle managers (contrasted to 86 percent of the foremen)” were sure that they would choose the same company again. On the other hand, 78 percent of middle management and 84 percent of lower management believed that they would be working at the same company at least five years in the future. There appears to be a strong job committment among middle and lower production managers and, more that any other analyzed group, the foremen have strong positive identification with their companies.

Morale, like job commitment, is high for both groups of production managers, though somewhat lower than job satisfaction. Their spontaneous comments suggest that the difference may be accounted for by the satisfaction managers’ experience with their own jobs compared to, the.general company atmosphere, i.e., they enjoy what they do on their immediate job (job satisfaction) more than the total company (morale) . Such a notion tends to be consistent with the

Table 10

Job Commitment and Morale
Production Management -
All Companies Combined

Question	Response	Middle Mngt. N=98 Percent	Lower Mngt. N=115 Percent
Does your job give you a chance ; to do what you really like to do alot?	Y e s	89%	87%
	Sometimes	3	5
	No	8	6
	Don’t Know	.-	2
Is there any other job you would rather do that you have we skill to do?	Yes	36% . .	20%
	Maybe”	1	1
	No	63	78
	Don’t know		1
If beginning again the same job would you choose this company?	yes	59%	86%
	Maybe	. 1 1 .	3
	No	11	10
	Don’t Know	19	1.
Rave you ever thought of quitting your job?	Yes	48%	45%
	Sometimes	8	5
	No	43	50
	Don’t now	1	
Would you guess you’ll be working 1 year, 2 years, 5 years, more than 5 years?	1 year	6%	3%
	2 years	10	9
	5 or more	78	84
	Don’t now	6	4
How is your morale at present?	Good	81%	83%
	Fair	13	12
	Poor	6	5.
	Don’t Know	--	--
Is it better or worse than it use to be?	Better	57%	52%
	Same	28	27
	Worse	1 5	21
	Don’t know	--	
How does your morale compare with the guys around you?	Better	54%	57%
	Same	35	36
	Worse	10	6
	Don’t know	1	1.

finding that the managers perceive their own morale to be distinctly higher than their fellow workers.

There is a strong consistency of answers with both middle and lower production managers to all questions related to job commitment and morale with one single exception, i.e. whether the managers would prefer another job to the one they currently hold. More than 15 percent of middle managers preferred another job, meaning upward promotion, than did the foremen.

In comparing middle managers and foremen with hourly production workers, the trends tend to be as follows: the management groups tend to like their. jobs better than the. hourly workers, identify more with the company, expect to remain longer with the company, have higher morale and higher job satisfaction.

Job Importance

Production managers perceive both shipbuilding as an . industry and their own jobs to be highly important (Table 11) . Middle and lower managers are similar in.answers to all questions related to job importance with the simple exception that more middle managers believe that they can have an important influence on the company than do the foremen. The primary reason given for the difference is that middle managers are perceived to be closer to and more influential with top management.

Table 11

Job Importance
Production Management
All Compar ies Comined

Question	Response	Middle Mngt. N=98 Percent	Lower Mngt. N-115 Per cent
Do you feel that shipbuilding is important?	Yes	99%.	98%
	Maybe	1	2
	No	--	.-
	Don't Know		--
Do you feel that your particular job is important?	Yes	99%	96%
	Sometimes	1 . .	4
	N o	--	
	Don't Know		
How does your family feel about y o u r j o b ?	Good		65%
	Fair	. 12	21
	Bad	6	4
	Don't Knew	4	lo
Does the company give you a feeling that you are important in getting the job done ?	Yes	76%	77%
	Sometimes .	11	11
	No	13	11
	Don't Know	--	1
Is there any way you can influence the company in an important way?	Yes	.75%	60%
	Sometimes	6	7 .
	No	17	29
	Don't know	2	4

The approximately three out of four managers who perceive the company to consider them to be important (in contrast to 50 percent of production workers) believe this to be true for at least one of the following reasons: the manager is commended or recognized by his immediate supervisor or by company management (35 percent); he has a responsible job (12 percent); he has received an increase in salary (8 percent) and he is treated as a team member and as an important part of the company (5 percent).

Both middle and lower managers rate higher than production workers in every "job importance" category. The differences are greatest in those areas related to how important the company deems the worker to be and, even more, to the small number of workers (18 percent) who feel they influence the company in important ways compared to the 75 percent of middle management.

Working Conditions and Benefits

Production managers tend to think highly of the fringe benefits of their company with the single exception of the. retirement program which the managers rate lower ratings and which is understood less than the other benefits (Table 12) . Middle production management is more satisfied with both wages and fringe benefits than the foremen with the exception of working hours. Middle managers often begrudge long hours on the job without obtaining what they perceive to be appropriate company recognition or appreciation. On

the other.hand, middle m~agers are more satisfied with their wages than are foremen with only 15 percent of middle managers who consider their wages to be poor.

The production management group is more satisfied in all areas reported in Table 12 than the hourly production workers with the single exception of working hours where the hourly. workers are slightly.more satisfied. The difference is greatest for wages, with which the hourly workers are distinctly less satisfied, with only. 40 percent of the workers indicating that wages are good compared to 66 percent of the middle managers.

Table 13 provides a comparison of specific complaints spontaneously expressed by production managers about shipyard working conditions. The most consistent complaints relate to the area of scheduling, coordination and communication. Some of these complaints are concerned with technical aspects or incompetence, but most of them relate to systems or communications which are caused by interfactional, rather than technical, failures. The data in Table 13 are consistent in that what tends to bother the middle managers are the same factors which tend to bother the foremen.

Further, with a single exception, the complaints of managers about working conditions parallels. complaints of the workers. The single exception relates to plant physical conditions, a common complaint of the workers, but of almost no importance to middle management and only of minor

Table 12

Working Conditions: Compensatory
Production Management
All Companies Combined

Condition/Benefit	Response	Middle Mngt. N=98 Percent	Lower N=11 Percer
Medical Insurance	Good	79%	75%
	Fair	10	11
	Poor	9	10
	Don't know	2	4
Vacations	Good	79%	73%
	Fair		
	Poor	12	15
	Don't know	--	
Wages	Good	66%	59%
	Fair	19	18.
	Poor	15	22
	Don't know	--	1
Sick Leave	Good	90%	86%
	Fair	5	3
	Poor	5	8
	Don't know	--	3
Retirement	Good	56%	48%
	Fair	18	20
	Poor		20
	Don't know		12
Working Hours	Good	81%	86%
	Fair	12	8
	Poor	7	6
	Don't know	--	--
Safety*	Good	56%	62%
	Fair	28	24
	Poor	15	9
	Don't know	1	5

Note: *Item not "compensatory, " but included for additional information.

importance to the foremen. Further, the hourly workers are much more concerned about inadequate safety conditions in the yard with 35 percent of the workers perceiving safety conditions to be poor contrasted to 15 percent of middle managers and less than ten percent of the foremen.

Table 13

Working Conditions: Non Compensatory
Production Management
All Companies Combined

Volunteered Complaint	Middle Mngt. N=98. No. Complaints	Lower Mngt. N=115 No. Complaints
Plant Physical Conditions		4
Scheduling Coordination, and Communication	108	1 1 7
Inadequate Equipment or Materials	46	48
Company Atmosphere	3 0	25
Non-Job Plant Facilities	2	2
Company Rules and Regulations	2	2
Unspecified	4	3

Note: The total number of complaints exceeds the number of management personnel, because many volunteered several different complaints or volunteered the same complaint to several different questions.

. Workers' Perceptions of Other Workers

Production managers generally have a high opinion of their fellow workers.although middle management has a lesser high regard for them than do the foremen or hourly production workers (Table 14) . In general, the foremens' attitudes toward their fellow workers tend to resemble more the attitudes of the hourly workers than middle managers and, interestingly enough, this is the only area in which such a parallel relationship exists. In all others, there is a closer relationship of responses between lower and middle managers . than either management group with the hourly workers.

With-regard to those workers who are preceived by their fellows not to work hard, there is no consistent trend as to the cause. The expressed causes varied, ranging from personal factors such as "lazy" or "no pride in work," to . factors beyond the workers' control, such as "poor scheduling" or "faulty equipment."

Table'14

Workers' Perceptions of Other Workers
Production Management
All Companies Combined

Question	Response	Middle Mngt. N=98 Percent	Lower Mngt. N=115 Percent
How do you feel about the guys you work with?	Good	82%	94%
	Fair	12	6
	B a d	6	--
	Don't know		
How hard do the guys around here work?	Hard	49%	54%
	Medium	35	36
	Lax	15	10
	Don't Know	1	--

Promotion [0]

Middle and lower production management are in approximate agreement related to promotions at the company, both in terms of personal opportunity and the company promotion process (Table 15). Although a significant number of managers believe the promotion process of the company to be unfair, the majority consider the process to be a fair one. It is noteworthy, too, that the proportion of managers who indicate a desire to be promoted closely approximates the number who believe the promotion system to be fair. Further, the number who expect to be promoted is approximately half as large as those desiring promotion.

Comparing the production managers responses with the hourly workers, the managers have a distinctly better opinion about the promotion process at the company than do the hourly workers. To a lesser degree, the managers tend to have a greater desire to be promoted than the workers and have a high expectation that promotion will materialize.

Supervision

Production managers have a positive feeling toward their immediate supervisor. Table 16 indicates that approximately 80 percent of the managers have such a positive attitude, and that only an insignificant number believe the relationship to be poor. Compared to the hourly workers, more feedback, both positive and negative, seems to occur between the

Table 15

Promotions
Production Management
All Companies Combined

Question	Response	Middle Mngt, N=98 Percent	Lower Mngt. N=115 Percent
Do you have any interest being promoted?	Yes	70%	66%
	Sometimes	6	7
	No	24	2
	Donct Know		25
Do you think you will get promoted?.	Yes	31%	36%
	Sometimes		14
	No	40	39
	Don't know	--	11
Do you think the promotion process is fair?	Yes	65%	61%
	Sometimes		17
	No	24	19
	.Don't Know	4	3

manager and his supervisor than is true for the hourly worker and his supervisor. The managers' perceive their supervisors as utilizing more negative feedback than positive, and this tends to be more true of the middle manager that the foremen.

Most managers indicate a need for feedback from. their supervisor although a small percentage of managers (seven percent) indicated that feedback was unnecessary since they know when they do a good or poor job and don't need to hear it from anyone else. Most managers indicated a particular appreciation for positive feedback but about five percent believed positive feedback to be inappropriate and

unnecessary since the manager is expected to do a good job and should be told only when he is not measuring up to standard. Most managers perceive their supervisor to use positive and negative feedback in balance, although approximately 15 percent complained that their supervisor invariably used negative feedback and seldom used positive.

Compared to hourly workers, the two most evident differences are that the managers receive more feedback, especially negative feedbacks, and believe that their problems get action from the company much more frequently than do the hourly workers.

.Table 16

Supervision
Production Management
All Companies Combined

Question	Response	Middle Mngt. N=98 Percent	Lower Mngt. N=115 Percent
How do you feel about your boss as a supervisor?	Good	81%	86%
	Fair	11	10
	Poor	6	2
	Don't Know'	2	2
Does your boss tell when he feels you have done a good job?	Y e s	64%	77%
	Sometimes	10	11
	No	25	12
	Don't know	1	--
Does your boss tell when he feels you have done a bad job?	Yes	82%	79%
	Some times	5	4
	No -	12	1 5
	Don't Know	1	2
When you approach your boss or someone else on a problem, does it go anywhere?	Yes	83%	89%
	Sometimes	11	5
	No	4	6
	Don't Know	2	--

Support Services Management

Support services management is defined for the purposes of this study to include all managers who were not directly responsible for production but rather related to production with some kind of professional (engineering, medical) or non-professional (clerical, secretarial) support service. This group is generally divided into two groups, namely, department managers, herein designated as lower management, and those managers above the department level who do not directly report to the president, designated as middle management. The middle management group numbered 49 managers, and the lower management.group numbered 76.

Job Satisfaction

Job satisfaction among middle and lower support services management is high, with more than 80 percent of both groups indicating high job satisfaction (Table 17). This figure compares favorably with production managers and is higher than support services workers (71 percent) and hourly production workers (65 percent).

Table 17

Job Satisfaction
Support Services Management
All Companies Combined

Question	Response	Middle Mngt. N=49 Percent	Lower Mngt. N=76 Percent
Considering everything, on a scale from 1 to 5, rate your overall job satisfaction.	Good	81%	85%
	Average	15	14
	Poor	4	1
	Don't Know		

Job Commitment and Morale

Table 18 -learly indicates that support services managers like their jobs, with-middle management giving a somewhat higher rating than lower management. In comparing these figures with other worker group's, support services managers like their jobs more than hourly or salaried production or support.services workers, but less than production managers. The reasons support services middle managers give for liking their jobs approximates those given by production managers; namely, job security, salary and fringe benefits, interesting job and comparable workers. Lower support services managers indicate, in contrast, that they like their jobs primarily because of "the people", their fellow workers, and to a lesser degree an interesting job, liking shipbuilding, the quality product, and the plant location. In further contrast to the other groups, "considerably more lower managers mentioned pay to be what they disliked, rather than liked, about their job.

With most other areas related to job commitment and morale, support service managers were comparable to the other groups, including morale which perceived to be high, better than it used to be and better than the morale of fellow workers. One less consistent finding is that while 73 percent of middle management would choose the same company again, only 60 percent of lower management concurred. By contrast, only 45 percent of lower managers and 73 percent of middle

Table 18

Job Commitment and Morale
Support Services Management
All Companies Combined ,

Question	Response	Middle Mngt. Percent	Lower Mngt. Percent
Does your job give you a chance to do what you really like to do slot?	Yes	82%	77%
	Sometimes	10	
	No	8	17
	Don't know	--	1
Is there any other job you would rather do that you have the skill to do?	yes	52%	26%
	Maybe	--	3
	No	48	68
	Don't know	---	3
If beginning again the same job would you choose this company?	Yes	73%	60%
	Maybe	4	12
	No	21	17
	Don't know	2	11
Have you ever thought of quitting your job?	Yes	73%	45%
	Sometimes	-4	7
	No	2 3	47
	Don't know	--	1
Would you guess you'll be working 1 year, 2 years, 5 years, more than 5 years?	1 year	1 7 %	9%
	2 years	7	11
	5 or more	73	80
	Don't know	3.	--
How is your morale at present?	Good	73%	77%
	Fair	17	16
	Poor	10	7
	Don't know	--	--
Is it better or worse than it use to be?	Better	44%	47%
	Same		28
	Worse	29 .	25
	Don't know	--	--
How does your morale compare with the guys around you?	Better	4 %	5 l%
	Same	41	35
	Worse	10	14
	Don't know	--	--

managers ever considered seriously quitting their jobs. Further, 52 percent of middle managers contrasted with 26 percent of lower managers indicated that they preferred a different job. These data are difficult to interpret but the qualitative interview data suggest that the lower management group has higher job identification, has less intense need to be promoted but, at the same time, somewhat less company identification.

Job Importance

All questions related to job importance indicate that both middle and lower support services managers consider both shipbuilding and their own particular job to be highly important (Table 19). To a lesser, yet still important degree, both groups feel that their families feel good about their jobs, and that their companies, in turn, believe them to be important in getting the job done. The only trend of discrepancy in this whole pattern relates to lower managers' perceptions about their influence upon the company. The majority of lower support services managers believe they do influence the company in important ways but, among these, the most frequently expressed reason for this influence is through the normal course of attempting to do good work on one's own job. Lower support services managers do not perceive that they have a significant influence upon the company other than through their current job. This trend in support services managers parallels production managers in a significantly similar pattern.

Table 19

Job Importance
Support Services Management
All Companies Combined

Question	Response	Middle Mngt. N=49 Percent	Lower Mngt. N=76 Per cent
Do you feel that shipbuilding is important?	Yes	96%	98%
	Maybe	4	2
	No	--	--
	Don't Know	--	--
Do you feel that your particular job is important?	Yes	99%	93%~
	Sometimes	1	6
	No	--	1
	Don't know	--	--
How does your family feel about your job?	Good	67?	7 0 %
	Fair	10	16
	Bad	15	14
	Don't know	8.	--
Does the company give you a feeling that you are important in getting the job done ?	Yes	71%	71%
	Sometimes	12	12
	No	17	. 17
	Don't Know	--	--
Is there any way you can influence the company in an important way?	Yes	73%	59%
	Sometimes	8	5
	NO	17	32
	Don't know	2	4

Working Conditions and Benefits

Support services managers, with the single exception of retirement, rate fringe benefits high (Table 20). Wages, on the other hand, are rated lower by support services middle managers than any other management group, witlin only 48 percent of the middle managers perceiving their salaries to be good and 23 percent perceiving them to be poor. By contrast, support services managers have the highest regard for safety conditions of any comparable group with about two-thirds of the managers perceiving safety to be good compared to only 40 percent of production workers.

Table 21 indicates that the area of scheduling, planning and communication clearly heads the list of spontaneous complaints coming from both middle and lower support services managers. Like production managers, these managers complain not so much about technical incompetence of personnel but of inadequate systems which lack adequate initial planning which produces additional inefficiency in attempting to coordinate and communicate down the change of command. With all workers at all levels, this is the greatest source of complaint related to working conditions.

The second area of complaint, company atmosphere, relates to numerous factors, including the aforementioned ineffective coordination and communication. Other factors related to company atmosphere include co-worker interaction. While most workers

Table 20

Working Conditions and Benefits
Support Services Management
All Companies Combined

Condition/Benefit	Response	Middle Mngt. N=49 Percent	Lower Mngt. N=76 Percent
Medical Insurance	Good	73%	80%
	Fair	17	9
	Poor	6	7
	Don't Know	4	4
Vacations	Good	92%	79%
	Fair	4	15
	Poor	4	1
	Don't know	--	5
Wages	Good	48%	65%
	Faiy.	29	20
	Poor	23	15
	Don't know		--
sick Leave	Good	88%	91%
	Fair	6	4
	Poor	4	4
	Don't know	2	1
Retirement	Good	45%	70%
	Fair	20	7
	Poor	28	16
	Don't Know	7	7
Working Hours	Good	83%	88%
	Fair		9
	Poor	11	3
	Don't know	--	--
Safety*	Good	62%	69%
	Fair	20	12
	Poor	10	12
	Don't know	8	7

*Item not "compensatory, " but included for additional information.

tend to be satisfied with their fellow workers, when complaints arc made about their peers or subordinates, the complaints relate more to technical incompetence than interpersonal variables, whereas when workers complain about their supervisors, it is the opposite, that is, complaints related to supervisors are primarily related to personal factors, such as attitude or communication deficiencies rather than technical.

Complaints related to working conditions show similar trends for both groups of support services managers, i.e. what bothers one group tends to bother the other. Further, with the exception of plant physical conditions and inadequate equipment which is a more common complaint of production managers and hourly workers, the support services complaints show similar trends to all other groups in the sample.

. Table 21

Complaints About Working Conditions
Support Services Management
All Companies Combined

Volunteered Complaint	Middle Mngt. N=49 No. Complaints	Lower Mngt. N=76 No. Complaints
Plant Physical Conditions	5	5
Coordination, Scheduling, Communication	68	80
Inadequate Equipment or Materials	11	19
Company Atmosphere	32	30
Non-Job Plant Facilities	--	2
Company Rules and Regulations	1	0
Unspecified		

Note: The total number of complaints exceeds the number of personnel, because many volunteered several different complaints or volunteered the same complaint to several different questions.

Workers' Perceptions of Co-Workers

Support services managers, like all other categories of shipyard workers, have a high regard for the people with whom they work (Table 22). Consistently, workers indicate that their relationships and interactions with their peers is one of the most positive aspects of their work situation. To a lesser degree, but still high, 74 percent of middle management consider that their fellow workers, which includes subordinates and bosses as well as peers, work hard. This, is a significant figure in that it represents the highest rating of any group interviewed, i.e. roughly 25 percent more support services middle managers believe their fellow workers work hard than any other management, salaried or hourly group. Lower support services managers are more akin to the ratings of the other groups which believe that about one-half of their fellow workers work hard.

Table 22

Workers' Perceptions of Co-Workers
Support Services Management
All Companies Combined

Question	Response	Middle Mngt. N=49 Percent	Lower Mngt. N=76 Percent
How do you feel about the guys you work with?	Good	90%	89%
	Fair	10	11
	Poor	--	--
	Don't know		--
How hard do the guys around here work?	Hard	74%	56%
	Medium	14	29
	Lax	1 2	14
	Don't know	--	1

Promotion ,

The desire to be promoted is the highest among the support services middle management group compared to any other group in the shipyards and, with the exception of the professional support services group, has a higher percentage who believe they will be promoted. Although the managers who expect to be promoted (42 percent) number only about one-half of those who desire promotion (81 percent), the former figure is still higher than all other groups except the professional group (Table 23; Table 31).

Further, the middle management group has a greater faith in the shipyards promotion procedures than any other group and, in this area, far exceeds the professional group by nearly.one quarter of their workers. Seventy percent consider the promotion process to be fair compared to 45 percent of the professional group. The most frequent reasons given for those who believe promotions to be unfair are that promotions at times are alloted, not on merit, but on favoritism, “politics” or personality.

Supervisor Relationships

Managers in support services, consistent with all other groups, have a high regard for their immediate supervisor (Table 24). About 80 percent of both groups consider their supervisor to be good and only 10 percent consider him to be poor. Also consistent with all other groups is the

Table 23

Promotions
Support Services Management
All Companies Combined

Question	Response	Middle Mngt. N=49 Per cent	Lower Mnq N=76 Percent
Do you have apy interest being promoted?	Yes	81%	70%
	Sometimes	2	3
	No	17	27
	Don't Know	--	--
Do you think you will get promoted?	.Yes	42%	35%
	Sometimes	8	5
	No	40	51
	Don't know	10	8
Do you think . the promotion. process is fair?	Yes	70%	39%
	Sometimes	16	19
	No	14	37
	Don't know	--	5

much more frequent use of negative reinforcement than positive, although most of the managers indicated that the negative feedback was done normally in a helpful, rather than inappropriate manner.

The managers in both groups generally ascribe the same positive supervisory qualities to their bosses, namely, . "communicates well" and "is technically competent" and "gives you freedom to operate" ("lets you alone"). However the last quality (freedom) was mentioned twice as often by middle managers as a positive supervisory quality than was mentioned by lower managers. On the other hand, being "helpful" was the most frequent positive quality mentioned by lower management, and infrequently mentioned by middle managers.

Table 24

Supervisor Relationships
Support Services Management
All Companies Combined

Question	Response	Middle Mngt. N=49 Percent	Lower Mngt. N=76 Percent
How do you feel about your boss as a supervisor?	Good	82%	79%
	Fair		
	Poor	10	10
	Don't Know	2	4
Does your boss tell when he feels you have done a good job?	Yes	59%	60%
	Sometimes	4	7
	No	3	33
	Don't know	4	--
Does your boss tell when he feels you have done a bad job?	Yes	81%	74%
	Sometimes	2	
	No	15	16
	Don't Know	2	5
When you approach your boss or someone else on a problem, does it go anywhere?	Yes	76%	80%
	Sometimes	12	14
	No	12	5
	Don't know		1

Support Services Personnel

Originally it was deemed appropriate to analyze professional support services personnel separate from non-professional, but an early perusal of the data indicated that the similarity among these two groups was sufficiently great to consider them together. The result in both groups, then, will be discussed in this section of the report.' Each group contains a sample of the various job titles within each area and, from these groups, the persons interviewed

were randomly selected. The professional support services group contains 62 persons and the non-professional 208.

Job Satisfaction

As indicated in Table 25, the results related to job satisfaction are identical for the the two groups. Job satisfaction tends to be high, although not as high as any of the management groups, and slightly higher than the hourly production workers.

Table 25

Job Satisfaction
Support Services Personnel
All Companies Combined

Question	Response	Professional N=62 Percent	Non-Professi N=208 Percent
Considering everything on a scale from 1 to 5, rate your overall job satisfaction.	Good	70%	71%
	Average	23	23
	Poor	5	5
	Don't know	2	1

Job Commitment and Morale

With most questions related to job commitment and morale, the non-professional workers scored higher than did the professional workers (Table 26) . This trend is especially pronounced in the questions related to thoughts about quitting ones job and the prediction about still working with the same company five years or more in the future. With the non-professional group, 40 percent of the workers indicated that they had ever thought of quitting compared to 56 percent

of the professional. group, and, in terms of long tenure with the company, only 57 percent of the professional group indicated that they believed that they would still be working with the same company five years into the future compared to 77 percent of the non-professional workers. The professional workers' projection of longetivity of-job is the lowest of any of the tested groups. Related worker comments, however, indicate that this reflects less a dissatisfaction with the current job as it does the recognition that jobs' tend to be comparatively more plentiful for professional personnel which make the professional.a more mobile worker to take a job elsewhere if promotions don't occur or opportunities or. benefits no longer seem satisfying.

In terms of what these workers like and dislike most about their jobs, there are some interesting differences. Whereas the non-professional group tends to emphasize job security and the people most about their jobs, the professional group talks more about the intrinsic enjoyment in what they are doing on the job, the pride in the product and its workmanship, and the company location. In terms of what the workers dislike the most, both groups complain about wages and benefits but even more important to the professional group is what they believe to be an unhealthy company attitude in the sense that they perceive the company to demonstrate little interest, respect or appreciation to the professional worker.

Table 26

Job Commitment and Morale
Support Services Personnel
All Companies Combined

Question	Response	Professional N=62 Percent	Non-Professional N=208 Percent
Does your job give you a chance to do what you really like to do slot?	Yes	71%	75%
	Sometimes	14	11
	No	15	14
	Don't Know	--	
Is there any other job you would rather do'that you have the skill to do?	Yes	40%	35%
	Maybe	9	4
	No	51	57
	Don't know	--	4
If beginning again the same job would you choose this company?	Yes	68%	75%
	'Maybe	10	5
	No	21	17
	Don't know	1	2
Have you ever thought of quitting your job?	Yes	56%	40%
	Sometimes	3	8
	No	41	51
	Don't Know		
Would you guess you'll be working 1. year, 2 year, 5 years, more than 5 years?	1 year	15%	10%
	2 years	17	5
	5 or more	57	77
	Don't Know	11	7
How is your morale at present?	Good	74%	72%
	Fair	13	15
	Poor	11	12
	Don't Know	2	
Is it better or worse than it use to be?	Better	60%	51%
	Same	24	26
	Worse	16	23
	Don't Know	--	--
How does your morale compare with the guys around you?	Better	47%	49%
	Same	45	45
	Worse	6	5
	Don't Know	2	1

Job Importance

The support services groups, like all the shipyard personnel, believe that both shipbuilding and their particular job is important (Table 27) . There is, however, another trend which appears significant with the professional group. Although recognizing their job to be important, they deem it less so than any other group in the shipyard. Further, of all the personnel groups, fewer of the professional workers perceive that the company gives them the feeling that they are important in-getting the job done, and fewer than one-half of the professional group believe that. they can influence the company in any important way. When asked why, the professional tends to respond with answers such as, “my poor image,“ “its futile to try.” As stated earlier, the professional group has the greatest predilection to consider moving to another company and; along with job availability, a primary cause for this need for mobility is the professional's perception that the company doesn’t care.

Working Conditions and Benefits

With the exception of retirement, the support services group tend to be satisfied with the fringe benefits program of the shipyards generally, less so than the management group but, again, more than production workers (Table 28) . However, only 42 percent of the professional group and 28

Table 27

Job Importance
Support Services Personnel
All Companies Combined

Question	Response	Professional N = 62 Percent	Non-Professional N=208 Percent
Do you feel that shipbuilding is important?	Yes	98%	97%
	Maybe	2	1
	No	--	1
	Don't know	--	--
Do you feel that your particular job is important?	Yes	85%	93%
	Sometimes	8	3
	No	7	3
	Don't Know	--	1
How does your family feel about your job?	Good	79%	68%
	Fair	7	11
	Bad	6	
	Don't Know	8	16
Does the company give you a feeling that you are important in getting the job done ?	Yes	53%	62%
	Sometimes	20%	12
	No	27	26
	Don't Know	--	--
Is there any way you can influence the company in an important way?	Yes	45%	36%
	Sometimes	13	7
	No	35	49
	Don't know	7	8

percent of the non-professional believe the retirement program to be a good one. Judging by the fact that about 20 percent answered "don't know", this deficit does not seem to be of major concern to the workers. Wages, especially with the non-professional group., appear to be of greater concern with only 46 percent believing the wages to be good.

Working conditions, not related to compensation, show a similar trend to that prevalent with the other personnel groups (Table 29) . Scheduling and coordination of work effort, particularly with the professional group, tend to be a primary complaint related to the work effort. The complaints relate less to technical incompetence of personnel than to inadequate planning systems ineffectively communicated to the various Segments of the work force. Both groups, and especially the non-professional group in proportion to other complaints, registers complaints about company atmosphere. The faulty company atmosphere has many dimensions, but to the support services workers it means primarily a perceived lack of company interest and concern in them as important persons accompanied with a communications problem which prevents optimum effectiveness and interaction.

Plant physical conditions are not a serious problem with the support services workers although safety conditions at the shipyard are of more concern to these personnel than to any other group except the hourly production workers.

Table 28

Working Conditions
Support Services Personnel
All Companies Combined

Condition/Benefit	Response	Professional N=62 Percent	Non-Professional N=20 Percent
Medical Insurance	Good	60%	67%
	Fair	26	14
	Poor		14
	Don't know	11	5
Vacations	Good	74%	71%
	Fair	18	13
	Poor	8	16
	Don't Know	--	--
Wages	Good	61%	46%
	Fair	23	27.
	Poor	16	27.
	Don't Know	--	--
Sick Leave	Good	74%	62%
	Fair	11	16
	Poor	8	22
	Don't Know	7	6
Retirement	Good	42%	28%
	Fair	22	19
	Poor	15	34
	Don't Know	21	19.
Working Hours	Good	84%	86%
	Fair.	3.	8
	Poor	13	6
	Don't Know	--	
Safety*	Good	57%	55%
	Fair	16	21
	Poor	16	15
	Don't Know	11	3

*Item not "compensatory, " but included for additional information.

Only about 55 percent of these workers consider safety to be good and about 15 percent of these workers consider safety conditions at the yard to be poor.

Table 29

Complaints About Working Conditions
Support Services Personnel
All Companies Combined

Volunteered Complaint	Professional N=62 No. Complaints	Non-Professional N=208 No. Complaints
Plant Physical Conditions	4	23
Scheduling, Coordination, Communication	47	159
Inadequate Equipment or Materials	11	54
Company Atmosphere	40	74
Non-Job Plant Facilities	7	27
Company Rules and Regulations	4	5
Unspecified	0	9

Note: The total number of complaints exceeds the number of personnel, because many volunteered several different complaints or volunteered the same complaint to several different questions.

Workers' Perceptions of Other Workers

The working relationships with peers and other workers is very high with support services groups and, in fact, one of the most contributory positive aspects leading to job satisfaction (Table 30). Further, the high esteem with which these groups hold their fellow workers is comparable to that of the other groups and the majority, although a small majority, of the support workers deem their fellows to be hard workers.

Table 30 .

Workers' Perceptions of Other Workers
Support Services Personnel
All Companies Combined

Question	Response	Professonal Percent	Non-Professional N=208 Percent
How do you feel about the guys you work with?	Good	87 %	93%
	Fair	6	4
	Bad .	3	2
	Don't Know	2	--
How hard do the guys around here work?	Hard	57%	58%
	Medium	26	31
	Lax	13	7
	Don't know	- 2	1

Promotion

.The desire for promotion is high and about the same as found in the other groups (Table 31), with the most frequent responses being "of course" related to seeking promotion. The usual discrepancy between wanting to be promoted and expecting to be promoted are found in. these groups, especially with the non-professional workers.

Further, in all groups studied, the non-professional support services group had a lower percentage of those who believe the promotion process to be fair. In fact, it is the only group inwhich about as many workers perceive the shipyard promotion process to be unfair than perceive it to be fair. The overwhelming reason expressed by the non-professional group for the charge of unfairness is that promotions are frequently perceived to be given on the basis of favoritism,

politics or personality rather than worker merit. Although similar complaints of favoritism are given by the professional group, i.e. 25 percent of those complaining about unfairness in the process, other factors are also cited such as promoting from the outside rather than within, lack of effective promotion procedures and the technical incompetence of those making the decisions to judge quality of performance.

Table 31

Promotions
Support Services Personnel
All Companies Combined

Question	Response	professional N=62 Percent	Non-Professional N=208 Percent
Do you have any interest in being promoted?	Yes	76%	77%
	Sometimes		
	No	1	
	Don't know	2	1
Do you think you will get promoted?	Yes	49%	33%
	Sometimes	8	
	No	40	50
	Don't know	3	8
Do you think the promotion process is fair?	Yes	47%?	30%
	Sometimes	21	13
	No	21	42
	Don't know	11	15

Supervisory Relationships

The relationships between immediate supervisor and the support services worker are perceived to be of high quality with more than 75 percent of the workers feeling good about those relationships and only about 15 percent perceiving

them to be poor (Table 32). The most frequent positive comment related to the supervisor by the .professional group is his technical competence, immediately followed by factors related to personal interaction such as the following: fair, understanding and reasonable, gives the worker freedom to do the job, has good personal and interpersonal qualities, communicates well.

The professional group is the only group at the shipyards who perceive their supervisor to use positive reinforcement more frequently than negative reinforcement. Further, they tend to believe that feedback is given frequently, that the positive and negative feedback isin balance, and that even negative feedback tends to be given in a constructive manner. Most of the non-professional workers complain that they do not get sufficient feedback, either positive or negative, and that when feedback is given, it tends to be negative, rather than positive. However, with both groups the. supervisor-worker relationships tend to be positive ones and complaints related to supervision tend to be directed more toward upper management or the company than to the immediate supervisor.

Table 32

Supervisory Relationships
Support Services personnel
All Companies Combined

Question	Response	Professional N=62 Percent	Non-Professional N=208 Percent
How do you feel about your boss as a supervisor?	Good	79%	77%
	Fair	5	
	Poor	15	14
	Don't know	1	1
Does your boss tell when he feels you have done a good job?	Yes	68%	60%
	Sometimes	8	7
	No	24	32
	Don't know		1
Does your boss tell when he feels you have done a bad job?	Yes	58%	63%
	Sometimes	4	8
	No	34	24.
	Don't know	4	5
When you approach your boss or someone else on a problem, does it go anywhere?	Yes	81%	76%
	Sometimes		8
	No	1 3	10
	Don't know	2	6

Inter-Company Comparisons

Hourly Production Workers

Following the analysis of interview data for the composite of the ten shipyards, an analysis was made of the individual yards for the purposes of comparing the companies on the variables studied. The results are presented anonymously in order to protect the local shipyards from possible public identification. The identification of the local yards and any requested pertinent local data will be provided only to the official representatives of the local yard, and will contain only.those data which have.been obtained from the local yard making the request.

The following presentation of the data comparing local companies will be organized according to the procedures used in presenting the composite data interms of narrative and tables. However, one additional comparison will be made in this section of the report. In comparing companies, the tables will present a summary of the results by local company and, in addition, indices of inter-company comparisons will be presented for each of the six data categories. The indices of inter-company comparison were developed by designating each yard falling over one standard error of a percent above the median percent for all yards as “relatively high, “ each falling under one standard error below the median percent as “relatively law” and those in between as “in between.” These indices show relative standing only; a “relatively low” index means only that the percent for that yard is lower than the other yards,

not that it is low in any absolute sense.

Job Satisfaction

The composite data presented earlier (p. 3-3) indicated that the workers,in all companies tend toward high job satisfaction, and the following data verify that trend for the individual companies (Table 33). on a comparative basis, however, four companies, namely companies E, F, H, and J tend to rate distinctly higher in job satisfaction than the other six, and two companies (C and G) rate distinctly lower than the other eight.

Table 33 .

-Job Satisfaction
Hourly Production Workers

Question	Response	Percentages by Company A	B	C	D	E	F	G	H	J
Considering everything on a scale from 1 to 5, rate your overall job satisfaction.	Good	60	56	49	58	75	71	48	70	58	73
	Average	30	35	47	29	21	19	38	23	29	23
	Poor	5	6	4	1	3	4	1	0	1	1	6	9	4
	Don't now	2	3	---	-----	--	3	1	4	-	-

Job Commitment and Morale

Of the eight questions concerned with job commitment and morale, "the questions related to quitting one's job and the consistency of morale tend to show the greatest inter-company differences (Table 34) . Further, a positive relationship exists between the question related to quitting ones job and job satisfaction and morale, i.e. the greater the job satisfaction, the higher the morale and less the inclination to quit one's job. On the other hand, there tends to be a negative relationship between job satisfaction and the desire to have .a different job.

Table 34

Job Commitment and Morale
Hourly Production Workers

Question	Response	Percentages by Company A	B	C	D	E	F	G	H	I	J
Does your job give you a chance to do what you really like to do slot?	Yes	74	71	68	64	76	62	71	63	63	79
	Sometimes				20	7	15	10	14	13	2
	No	16	21	21	13	17	23	18	23	21	16
	Don't know		--	3	3	--	--		--	3	3
Is there any other job that you would rather do that you have the skill to do?	Yes	27	37	38	20	41	29	38	43	42	37
	Maybe	5	2	8	6	2	3	2	3	7	10
	No	66	61	49	69	56	62	60	51	45	52
	Don't Know	2		5	5	1	6		3	6	1
If begining again the same job would you choose this company?	Yes	72	72	70	78	60	71	67	72	71	72
	Maybe	5	4		14	7		10	6	7	5
	No	14	19	2	4	30	19	20	21	15	20
	Don't know	9	5	3	--	3	4	3	1	7	2
Have you ever thought of guitting your job?	Yes	37	49	55	41	30	42	56	37	37	24
	Sometimes		--			10	3		10	2	8
	No	5	50	38	54	60	55	39	53	61	65
	Don't know	--	--	--	--	--	--	--		--	--
Would you guess you'll be working 1 year, 2 years, 5 years or more?	1 year or less		17	11	11	8	19	18	17	*	*
	2 years	11	13	6	4	17	6	3	10	*	*
	5 years or more	70	4	66	73	61	64	72	58	*	*
	Don't know	11	56	17	12	14	11	7	5	*	*
How is your morale at present?	Good	60	58	55	73	76	76	60	71	*	*
	Fair	29	21	32	18	17	18	31	24	*	*
	Poor	11	21	13	9	7	6	7	5	*	*
	Don't now	--	--	--	--	--	--	2	--	*	*
Is it better or worse than it use to be?	Better	52	47	47	54	56	66	70	59	*	*
	Same	34	21	32	31	31	12	21	31	*	*
	Worse	13	31	19	15	14	21	7	10	*	*
	Don't Know	1	1	2	--	--	1	2	--	*	*
How does your morale compare with the guys around you?	Better	40	25	55	53	60	37	49	31	*	*
	Same	47	63	40	38	30	54	44	42	*	*
	Worse	7	7	--	4	7	5	5	7	*	*
	Don't know	6	5	5	5	3	4	2		*	*

Note: Non-inclusion of no response answers account for percentages less than 100%.
*Data were not available for Companies I and J

In comparing companies, Company J scores higher compared to the other companies in three of the eight questions with no ratings at the lower end, whereas companies B and C score at the lower end in four of the eight questions with no ratings at the higher end. The differences between company J and companies B and C tend to be imposing differences, with the remaining. companies rated between these two extremes.

Job Importance

Table. 35 includes those questions which relate to the workers' perceptions of job importance. The data clearly indicate that most of the workers from all ten companies believe that both building ships and their particular job, in contributing-to the process of shipbuilding, are important. Further, there is little variance between companies. By contrast, there are considerable differences between companies in regard to how important the workers perceive the company considers them to be, varying from very high & two companies to very low in three. There is less variance among companies when workers are asked if they feel they influence the company in any important ways, and generally all ratings are low That is, 36 percent of the workers in the highest company to only seven percent in the lowest company give an affirmative answer to the workers perceptions that they importantly influence their company and, among the workers who answer affirmatively, the most frequent reason given is that the influence comes by doing good work on their own particular job. Further, the workers who perceive their

Table 35

Perceptions of Job Importance
Hourly Production Workers

Question	Response	Percentages by Company A	B	C	D	E	F	G	H	I	J
Do you feel that shipbuilding is important?	Yes	87	98	90	95	94	100	95	97	94	92
	Maybe	6	--	8	2	3	--	5	3	--	5
	No	4	2	2	2	--	--	--	--	--	--
	Don't know	3	--	--	1	3	--	--	.-	6	3
Do you feel that. your particular job is important?	Yes	93	94	95	95	96	98	92	98		95
	Sometimes	4	4	5	3	2	--	3	--	13	5
	No	3	2	--	2	2	--	3	2	2	--
	Don’t know	.-	--	--	--	--	2	2	--	1	--
How does .your family feel about your job? .	.Good	58	49	53	60	62	84	57	69	64	69
	Fair	27	23	28	24	20		23	11	18	19
	Bad	11	l8	19	7	17	3	13	16	12	5
	Don’t know	4	10	--	--	1	5	7	4	6	7
Does the company give you a feeling that you are important in getting the . job done?	Yes	53	38	40	42	55	58	56	68	28	73
	Sometimes	13	16	26	9	12	12	16	11	18	10
	No	30	44	32	35	17	4	28	20	44	12
	Don’t know	4	2	2	’4	25	26	--	1	10	5
Is there any way you can influence the company in an important way?	Yes	19	13	13	22	36	18	13	25	7	15
	Sometimes	3	6	8	6	7	7	13	10	5	10
	No	69	78	75	61	50	69	61	52	74	66
	Don’ t Know	9	3	4	11	--	6	13	13	9	6

Note: Non-inclusion of no response answers account for percentages less than 100%

families to deem their job to be important also tend to perceive that their company considers them to be important in getting the job done.

When combining the ratings for all five questions, workers from companies J and A tend to rate job importance higher than workers from the other eight, while those from at least three companies (B, C, and I) tend to rate job importance low.

Working Conditions

Table. 36,. which relates to fringe benefits or working conditions related to compensation, indicates only minor inter-company disparity regarding retirement And, with the exception of one company which was abnormally low, shows little disparity regarding working hours. However, most workers for all ten companies were pleased with their working hours but displeased or didn't know about the retirement program. Opinions related to medical insurance were also generally high with minimal disparity between companies.

With wages, sick leave and vacations, however, the inter-company disparity was high.with the workers in some companies, e.g. Company J, being highly satisfied with all their benefits while the workers in other companies, such as Company I, being highly dissatisfied with all three benefits. Although the majority of the companies followed this consistent trend, at least two companies, namely companies A and C, had varied

responses, regarding wages and vacations. Overall, the workers in Companies J, F, and D were comparatively satisfied with the company benefits discussed whereas Companies I, G, and C were dissatisfied.

Perception of Other Workers

Most workers in all the companies studied were pleased with both the technical competence and human interaction of their fellow workers. In fact, more than any other single factor, the. relationships with ones peers was the highest rated variable leading towards job satisfaction. Table 37 indicates that only in four companies did any,workers feel their relationships with their fellow workers to be “bad”, and the highest percentage of such workers with any company was six percent.

The workers had a somewhat lesser opinion related to how hard their fellow workers worked. For example at Company D, the workers perceived that 69 percent of their fellows worked hard and that only seven percent of the workers were lax in their working performance. On the other hand, the . workers at company C believed that only 36 percent of their peers worked hard whereas 24 percent were lax. Although “working hard” has no absolute value, the results were consistent enough throughout the sample to determine perceptual meaning.

Table 36

Working Conditions and Benefits: Compensatory
Hourly Production Workers

Condition/Benefit	Response	Percentages by Company AB	CD	E	F	GH	I	J
Medical Insurance	Good	58	47	55	72	69	54’69	54 53 70
	Fair	2 2 3 3 2 3 1 6 6 1 8 2 1 1 7 8 1 8						
	Poor	3 1 6 1 3 2 1 0 1 0 1 6 1 5 2 4 1 3						
	Don’t know	1 3	4	1 0 1 5 1 8 4 2 4 1 5 3				
Vacations	Good	29	54	34	74	49	72	36 44 19 92
	Fair	25	21	19	18	25	17	33 20 18 5
	Poor	- 4 1 2 4 4 7 4 2 1 1 1 3 8 3 1 5 5						2
	Don’t”now	5 1	- - 4 5 - - 3 5 8 - -					
Wages	Good	27	43	30	49	37	54	15 54 16 60
	Fair	17	32	28	33	32	19	26 30 16 23
	/poor	6	24	42	18	31	22	59 14 67 17
	Don’t Know	--	11------		5	-=.2		l--
Sick Leave	Good ‘	2 7 2 0 3 2 1 1		7 1 8 1 6		6		2 8 9
	.Fair	1 6 2 1 8 2 4 7 1 2 3 3 8						
	Poor	6 5 1 3 0 7 1 5 8 6 0 4 9 5 5 8 7						3
	Don’t Know	4 1	8 3 0 1 6 3 1 1 5 2 3 3 6 3 - -					
Retirement	Good	33	35	15	17	10	10	11 18 * *
	Fair	20	18	4	17	17	15	8 23 * *
	Poor	1 5 3 5 4 9 3 6 3 9 3 8 4 6 2 0						* * .
	Don’t know	3 2 1 2 3 2 3 0 3 4 3 7 3 5 3 7 *						*
Working Hours	Good	88	88	73	89	93	90	59 91 93 89
	Fair	1 0 5 1 7 4 3 6 2 1						- - 5 - :
	Poor	.	1 5 1 0 4 3 4 1 7 6 2 3					
	Don't Know	1	2	----	l	--	3------	

Note: Non-inclusion of no response answers account for percentages less than 100%
*Data were not available for Companies I and J

Table 37

Perceptions of Other Workers
Hourly Production Workers

Question	Response	Percentages by Company AB	CD	E	F	G	H	I	J
How do you feel about the guys you work with?	Good	85	88	96	93	94	89	85	90	89	84
	Fair .	1	0	1	1	4	5	6	7	1	3	4	1	0	1	1
	Bad	4		--	--	--	4	2	6	----	
	Don't know	1	,1		--	2	----------				
How hard do t h e . guys around here work?	Hard	4	3	5	4	3	6	6	9	5	9	5	5	4	8	5	5	*	*
	Medium	4	2	3	2	4	0	2	2	3	1	3	4	3	9	2	7	*	*
	Lax	1	3	1	4	2	4	7	1	0	1	1	1	3	1	5	*	*	

Note: Non-inclusion,. of no. response answers account for-percentag&s less than 100%
*Data were not available for Companies I, and J

P r o m o t i o n .

If there is the existence of an American dream that all workers wish to better themselves occupationally, such is not the case in the findings of this study, at least related to moving upward in the company, e.g. being promoted. Table 38 shows that at least three compaies (B,. C, and E) more workers indicated that they had no interest in being promoted than vice versa. On the other hand, at three other companies, namely H, I, and J, most workers indicate a desire for promotion. The reason for the differences between companies is not entirely clear except that there is a trend indicating that the workers at the companies Who have an interest in being promoted may also believe that they will be promoted as

Table 38

Promotions
Hourly Production Workers

Question	Response	Percentages by Company AB	C	D	E	F	G	H	IJ
Do you have any interest in being promoted?	Yes ,	58	45	42	51	43	81	53	72	68	74
	Some times	5	4	1	1	1	1	1	4	7	5	5	7
	No	36,51	45	36	48	14	39	23	27	16
	Don’t know	l	-	-	2	2	2	1	1	-	-	-	-	-	-
Do you think .you’ will get promoted?	Yes	37	21	19	20	34	47	31	45	30	40
	Sometime-s	1	4	8	8	1	3	9	1	2	1	3	2	8	1	2	1	8
	No	33	62	60	50	59	29	49	25	41	33
	Don’t Know	16	9’13	17	3	12	5	22	12	2
Do you think the pro- “motion process is fair?	Yes	38	33	40	42	28	39	49	38	27	24
	“ Sometimes	1	1	7	1	9	2	0	2	3	1	6	3	2	3	1	8	2	0
	No	33.57.	32	24	31	32	31	31	29	48
	Don’t Know	1	8	3	9	1	3	1	3	1	3	1	7	8	2	1	-	-

.Note: Non-inclusion of no response answers account for percentages less than 100%

indicated at Company H, and the reverse with Companies B and C. It may be that the desire to be promoted coincides with the expectation that promotion is possible. When considering whether the company promotion process is fair, more workers at four of the companies believe the process to be unfair than those who believe the process to be fair.

Supervision

Generally the production workers have a positive relationship with their immediate ‘supervisor (Table 39) . This was true with all companies, especially true with Companies E and H, with only Companies B and C showing less favorable relationships by comparison-with other companies .

The two questions relating to the use of positive (commendation) or negative (reproof) reinforcement showed a much greater use of negative rather than positive reinforcement as a motivator. This was true at eight of-the ten companies and, particularly, with Companies I, C, and B where negative reinforcement was used almost twice as much as positive reinforcement. With one-half of the companies, however, the use of each motivator seemed to be pretty much in balance.

Supporting the notion of good’ relationships with their immediate supervisor, most workers believe-that if they took a problem to their supervisor, it produced action and, further, that action was productive much more often from their immediate supervisor than from any other level of management or the union.

Table 39

Worker-Supervisor Relationships
Hourly Production Workers

"Question	Response	Percentages by Company A.B CD.E F G H I J
How do you feel about your boss as a supervisor?	Good	70 63 62 78 78 80 77 8 89 17 4
	Fair	18 26 23 13 8 11 17 11 31 4
	Poor	1 0 1 1 1 3 9 3 7 6 1 0 6 7
	Don't know	2 --- 2 -- -- 2 -- -- -- 5
Does your boss tell.when he feels you have done a good job?	Yes	63 45 34 56 75 71 65 70 36 66
	Sometimes	1 0 1 2 6 1 1 8 1 0 1 5 1 3 1 8 1 8
	No .	25 43 11 31 14 18 20 17 46 15
	Don't Know	2 --49 2 3 1------1
Does your boss tell when he . feels you have done a bad job?	Yes	67 81 66 72.63 75 66 72 79 65
	Sometimes	4 6 4 1 1 3 6 3 - 6 5 2
	No	28 11 26 9 21 13 23 21 11 28
	Don't Know	1 2 4 8 1 3 6 5 1 3 . 5 -
When you approach your boss or some-one else on a problem, does it 90 anywhere?	Yes	67. 55 60 78 80 78 64 66 * *
	Sometimes	1 4 2 1 1 3 7 4 - - 1 5 4 * * ,
	No	9 2 11 3 8 3 11 12 10* *
	Don't Know	10 3 14 7 7 11 9 20 * *

Note: Non-inclusion of no response answers account for percentages less than 100%
*Data were not available for Companies. I and J

Inter-Company Comparisons

Combined Middle and Lower Management

In order to make a company by company comparison of managers, as well as production groups', all managers of production and support services were combined for each company to make that comparison. The total number of managers interviewed is 337 with the number of managers from the various shipyards ranging from 25 to 54, a sample approximating the proportionate size of the local management group. The company comparisons are made by following the same procedure utilized in analyzing.the production workers.

Job Satisfaction

Job satisfaction among shipyard managers is high ranging from 90 percent of the managers in Company A who rate their own job satisfaction to be good compared with a low at Company C of 68 percent (Table 40). All companies have high job satisfaction, but companies C, H, and I tend to have a lower rating than the other seven.

Table 40

Job Satisfaction
Combined Management

Question	Response	Percentages by Company AB	CD	E	FGH	I	J
Considering every-thing, on a scale from 1 to 5 rate your overall job -satisfaction?	Good	90	89	68	85	87	89	84	75	72	81
	Average	10	11	32	15	10	9	16	11	20	11
	Poor	--	--	--	3	2	-	-	4	8	8
	Don't Know	--	--	--	---	--	-.	--	--	--	--

Table 41

Job Commitment and Morale
Combined Management .

Question	Response	Percentages by Company A B C D E F G H X J
Does your job give you a chance to do what you really like to do slot?	Yes	84 82 79 93-97 91-84-67-84 78
	Sometimes	6 3 4 2 3 4 8 1 0 4 7
	so	1 0 5 1 7 2 - - 5 ″ 8 2 3 8 l l
	Don’t know	-- -- -- -- -- -- 4
Is there any other job that you would rather do that you have the skill to do? .	Yes	26 26 29 20 47 24 28 38 28 37
	Maybe	3 -- -- 3 3 2 - - 2 - - - -
	No	71 74 71 77 50 74 64 58 72 63
	Don’t know	-- -- -- -- -_ -- 8 2 - - - -
If beginning again the same job would you choose this . company?	Yes	97 74 63 90 77 14 76 70 64 70
	M a y b e	3 . 3 . 4 5 3 4 8 9 8 7 .
	Ho	=- 20 29 5 13 20 12 15 24 15
	Don’t Know	-- -- 4 -- -- . 2 4 6 4 8
Have you ever thought of quitting your job?	Yes	36 56 54 51 40 58 52 55 48 37
	Sometimes	13 -- 4 3 1 7 6 - - 1 1 4 4
	N o	51 44 38 3 43 36 48 34 48 56
	Don’t Know	-- -- -- 43 ----- -- -- -- 3
Would you guess you’ll be working 1 year, 2 years, 5 years or more?	1 year or less	10 9 9 3 3 4 8 13426
	2 years	1 0 3 4 5 8 - - 6 8 4 4 2 2
	5 years or more	80 54 73 79 87 90 80 80 80 48
	Don’t Know	-- -- 1 3 1 0 1 0 - - 4 3 1 2 4
How is your morale at present?	Good	8 4 7 7 5 0 9 0 8 7 8 3 7 2 7 8 * *
	Fair	1 6 9 3 6 1 0 7 1 1 2 0 , 9 * *
	Poor	- - 1 4 1 4 - - 6 6 8 1 3 * *
	Don’t Know	-- -- -- -- -- -- -- -- * *
Is it better or worse than it use to be?	Better	58 49 32 62 57 47 56 46 76 77
	Same	16 29 32 25 33 30 24 28 20 26
	Worse	2 6 2 2 3 6 1 3 1 0 2 3 2 0 2 4 4 8
	Don’t Know	-- -- -- -- -- -- -- -- -- --
How does your morale compare with the guys around you?	Better	8 7 4 0 5 5 4 1 5 3 5 9 3 0 * * *
	Same	7 4 6 2 7 5 6 3 7 3 2 5 2 . * * *
	Worse	6 1 4 1 4 3 1 0 2 8 * * *
	Don’t Know	-- -- 4 -- -- 7 -- * * *

Note: Non-inclusion of no response answers account for percentages less than 100%
*Data were not available

Job Commibment and Morale

Job commitment is high for managers at all of the shipyards both in terms of dedication to one's job aid to the company. The mangers at all yards with the single exception of Company H overwhelmingly perceive their job as providing the opportunity to perform in stimulating work activities (Table 41) . Further; in all yards; more than 60 percent of the managers indicated that they would choose the same company if seeking a job again, ranging from a low of 63 percent at Company C to a high of 97 percent at Company D.

Morale, too, is high at most of the yards and generally the trend is for morale to be better currently than in the past for most managers, although there is considerable discrepancy between yards. Only 50 percent of the managers at Company C compared to 90 percent at Company D indicate their morale to be good. Further, at Company I, 76 percent of the managers perceive their morale to be better currently than in the past compared to 32 percent at Company C.

Job Importance

Nearly all managers at all companies believe both shipbuilding as an industry and their job in relation to shipbuilding to be important (Table 42). There is a distinct discrepancy among managers, however, related to the degree of acceptance of the job by the managers' families with two companies, B and C, rated comparatively low and companies A, E, and F high. The reason for this discrepancy is not

clear although some of the spontaneous comments suggest that the reasons may be related specifically to certain aspects of the job, for example excessive overtime, rather than to negative aspects related to shipbuilding as an industry or . lack of pride in a-particular--company.

Managers generally feel that they can influence the company in important ways, certainly more than do production workers. Again, however, there is distinct variance between companies with Company C at the low end of the ratings having more managers who believe they do not importantly influence the company-than those who do, compared to four companies wherein more than 70 percent of the managers believe they do have such influence.

Working Conditions and Benefits

Fringe benefits generally rate high among company managers with the exception of the retirement programs' at several of the yards where about as many managers believe the retirement program to be poor as the number who perceive it to be good (Table 43) . Further, wages are considered poor by managers at several companies, particularly Company I, and to a lesser extent at Companies C, G, and H. On the other hand, at four companies, namely A, D, E, and J, the managers clearly rated wages to be high with a variance of greater than 50% between the highest and lowest of the companies.

With regard to non-compensatory working conditions, safety conditions at the yard tend to be rated considerably

Table 42

Perceptions of Job Importance
Combined Management

Question	Response	Percentages by Company A	B	C	D	E	F	G	H	I
Do you feel that shipbuilding is important?	Yes	97	97	96	100	100	100	96	98	92
	Maybe	3	.	4,--		----4		2		4
	No	--	--	--	-	--	--	--	--	--
	Don't Know	- -	6	--	--	--	--	--	--	--
Do you feel that your particular job is important?	Yes	97	88	100	95	97	98	96	96	96
	Sometimes	3	9--		2	3	24		2	4
	No	--	--	--	--	--	--	--	--	--
	Don't know	--	--	--	--			--	--	--
How does your family feel about your job?	Good	87	50	42	65	93	83	68	67	56"
	Fair	13	38	37	25	--	8		8	24
	Bad	- -	9	17	5				8	8
	Don't know	----	4	5	--	9	8	6		8
Does the company give you a feeling that you are important in getting the job done ?	Yes	77	91	50	80	63	74	88	63	68
	Sometimes		--	21	10.17		15	8	12	12
	No		9.29,10		7, 1 0 4 1 0 1 6					
	Don't Know	--	--	--	--	3'	2	--	23	--
Is there any way you can influence the company in an important way?	Yes	58	52	36	77	63	77	72	59	56
	Sometimes	--	6	8	5	.7	4	4	20	--
	No	39	32	42	11.	23	17	16	21	44
	Don't Know	--	--	--	7	7	2	8	--	

Note: Non-inclusion of no response answers account for percentages less than 100%

Table 43

Working Conditions and Benefits: Compensatory
Combined Management

Condition/Benefit	Response	Percentages by Company A	B	C	D	E	F	G	H	I	J
Medical Insurance	Good	90	81	77	87		60	76	70	100	67
	Fair	7	3		10		15	16	15	--	7
	Poor	--	6	9	3	17	11	8	11	--	22
	Don't Know	3	--	9	--	3	8	--	4	--	4
Vacations	Good	77	86	77	80	63	88	72	83	52	96
	Fair	10	6	14	10	20	6	12	13	24	
	Poor	13	3	9	10	17	6	16	4	24	--
	Don't Know		5	--	--	--	--	--	--	--	--
Wages	Good	87	69	46	77	73	57	48	37	32	78
	Fair	13	17	18	18	14	26	24	28	24	15
	Poor	--	14	36	5	10	17	28	22	44	7
	Don't Know	G-	--	--	--	--	--	--	13	--	--
Sick Leave	Good	97	94	64	90	73	100	72	91	80	96
	Fair	3	3		--	10	--	20	.4	--	4
	Poor	--	3	18.	5	10	--	4	2	16	--
	Don't Know	--	--	13	5	3	--	4	2	4	--
Retirement	Good	55	80	37	41	-73	66	36	37	*	*
	Fair	16	8	18	31	7	13	16	20	*	*
	Poor		9	36	20	7	13	24	35	*	*
	Don't Know	19	3	9	8	13	8	-24	8	*	*
Working Hours	Good	97	97	77	72	70	89	88	80	88	85
	Fair	3	3		18	13			10	8	11
	~ Poor	--	--	18	10	13	2	8	6	4	4
	Don't Know	--	--	--	--	--	--	--	2	--	--
Safety**	Good	71	80	32	46	76	92	32	46	36	66
	Fair	29	11	23	41	13	8	40	20	32	15
	Poor	--	9	32	8	7	--	24	30	20	15
	Don't Know	--	--	13	3	4	--	--	4	8	4

Note: Non-inclusion of no response answers account for percentages less than 100%

*Data were not available for Companies I and J

**Item not "compensatory, " but included for additional information

higher at most yards by the managers than by the production workers and, at some companies, such as company B, approximately 50 percent more of the managers considered safety to be good than did the workers. Further, the variance between companies also was great with, for example, 92 percent of the managers deeming safety to be good at Company F compared to only 32 percent of the managers at Companies c and G. Compared to each other companies A, B, E, and F rated distinctly higher than the other six regarding safety while companies C, G, and I rated distinctly lower.

Perceptions of Other Workers

Managers, like all other workers, have a-high regard for their co-workers with six companies rating, more than 90 percent of their fellows as good to work with. With .regard to how *their* co-workers work, the ratings are less high, varying from 40 percent of the managers at Company G who believe their co-workers work hard to 85 percent at Company D.

Table 44

Perceptions of Other Workers
Combined Management

Question	Response	Percentages by Company A	B	C	D	E	F	G	H	I	J
How-do you feel about the guys you work with?	Good	94	73	79	95	90	92	84	94	92	70
	Fair	6	. 1	5	2	1	5	1	0	6	1
	Bad	2	4	4	1	9	.-	6	--	--	--
	Don't Know--	--	--	--	.-	--	--	--	--	--	--
How hard do the guys around here work?	Hard'	4	6	6	2	5	9	8	5	6	7
	Medium	4	5	2	6	2	9	1	0	2	7
	Lax	6	12.	8	5	3	15	8	15	*	*

Note: Non-inclusion of no response answers account for percentages less than 100%
*Data not available

" Promotion

With *the* exception of Company C, the great majority' of managers have a desire to be promoted (Table 45). At three of the companies (A, E, and G), most managers believe that they will be promoted in the future, whereas at two companies (C and J), distinctly more managers believe they will not be promoted than believe they will be. The other five companies are more equitable in their responses in that the variance between those managers who believe they will or will not be promoted is not significant.

Although most managers deem the promotions policy generally to be fair at the company, a composite total of - about 25 percent of the managers at the various yards do not believe promotions to be fair, ranging from 48 percent at Company J to 15 percent at Company D. With about 25 percent

Table 45

Promotions
Combined Management .

Question	Response .	Percentages by Company AB	CDE	F	G	H	I	J
Do you have any interest in being promoted?	Yes	71	64	46	69	70	77’	68
	Sometimes	3	6	4	1	0	7	4
	No	23	30	50	28	23	19	28
	Don't Know	--	--	--	3	--	--	--
Do you think you will get promoted?	Yes	52	35	13	30	57	34	52
	Sometimes	1	0	1	8	8	8	7
	No	29	44	71	36	36	43	36
	Don’Know	6	3	4	2	6	- -	1
Do you think the promotion process is fair	Yes	68	53	46	64	50	70	68
	Sometimes	10	15	17	21	23	11	--
	No	16	32	29	15	17	17	20
	Don’ t Know	--	--	8	- -	1	0	2

Question	Response .	Percentages by Company I	J
Do you have any interest in being promoted?	Yes	72	70
	Sometimes	4	4
	No	24	26
	Don't Know	--	--
Do you think you will get promoted?	Yes	39	40
	Sometimes	0	8
	No	31	48
	Don’Know	4	- -
Do you think the promotion process is fair	Yes	63	48
	Sometimes	11	12
	No	26	28
	Don’ t Know	1	2 4

Note: .Non-inclusion of no response answers account for percentages less than 100%

of managers who consider the promotion process to be an unfair one, and with, the majority of managers at several companies who believe that they never will be promoted, such attitudes are bound to be deterrents to motivation and productivity.

Supervisor Relationships

Countermanding the perception of many managers that they will not be promoted is the feeling of most managers that their relationship with their own supervisor is a good one (Table 46) . Especially is this true with Companies D and F and, with even the lowest rated company, Company C, most managers rate their immediate supervisor highly.

Table 46

Worker-Supervisor Relationships
Combined Management

Question	Response	percentages by Company A.B	CD	E	F	G	H	I	J
How do you feel about your boss as a super-visor?	G d	87	73	67	93	70	92	88	82	80	74
	Fair	1	3	9	2	1	3	2	0	4	4	8	1	2	7
	Poor	6	1	2	2	1	0	2	4	6	8	1	9
	Dont know	--	3	-------			2			----			
Does your boss . tell when he feels you have done a good job?	Yes	58	71	58	72	60	79	92	61	56	44
	Sometimes	1	0	3	1	3	1	0	1	0	6	4	1	1	1	6	8
	No	3	23	29	13	30	13	4	24	28	48′
	Don’t Know	9	--	--	2	--	2	--	2	--	--
Does your boss tell when he feels you. have done a bad j o b ?	*Yes*	78	85	71	74	70	79	84	83	92	70
	Sometimes	3	3	4	8	.	3	2	-	-	9	8	4
	No	19	12	21	18	24	13	12	.6	--	19
	Don’t Know	--	--	4	--	-	-	6	4	2	-	-	7
hen you approach .yourboss or someone else on a problem, does it go anywhere?	Yes	90	37	71	95	80	83	84	74	*	*
	Sometimes	7	-	8	2	1	3	8	1	6	1	7	*	*
	No .	6	1	7	3	7	7	-	-	7	*	*
	D o n ' t k n o w	4	-	-	-	-	2	.	-	2	*	*

Note: Non-inclusion of no response answers account for percentages less than 100%
*Data were not available

The managers' perceive, however, that their supervisors do not use positive reinforcement (praise) at a rate any greater than the supervisors of production workers and, as a motivator, negative reinforcement is used considerably more frequently. Shipyard supervisors at all managerial levels tend to use reproof rather than commendation as a motivator of the worker.

Support Services

The number of professional support services personnel were too few- to make significant comparisons on-a company by company basis, but the sample of 208 non-professional support services workers is sufficiently large to make possible such a comparison. A narrative discussion of the latter group compared by company will not be made here, but the data are included in the following seven tables (Tables 47-53) The narrative section following the tables will compare the non-professional support services with the production worker and managers for all ten companies.

Table 47

. Job Satisfaction
Combined Management'

Question	Response	Percentages by Company A	B	CD	EF	GHI	J
Considering every-thing, on a scale from 1 to 5 rate your overall job satisfaction?	Good	75	75	66	83.	85	74 60 76 67 60
	Average	--	25	21	13	15	15 40 24 27 31
	Poor	--	--	1	3	4	- - 1 1 - - - - 6 9
	Don't Know	25,	--	--	--	--	-- -- _- -- --

Table 48

Job Commitment and Morale
Non-Professional Staff

Question	Response	Percentages by Company A *	B	C	D	E	F	G	H	I	J
Does your job give you a chance to do what you really like to do slot?	Yes	100	75	71	75	90	82	60	77	74	68
	Sometimes	--	--	8	17	--	7	15	17	13	
	No	--	25	21	8	10	11	25	6	13	2
	Don't Know	--	--	--	--	--	--	--	--	--	--
Is there any other' job that you would rather do that you have the skill to do?	Yes	75	.50	33	25	20	29	35	34	56	43
	Maybe	--	--	--	4	--	--	5	9	--	
	No	25	50	67	67	75	60	55	54	47	4:
	Don't Know	--	--	--	4	5	1 1	5.	.3	7	2
If beginning again the same job would you choose this company? .	Yes	50	20	89	-71	75	82	80	85	86	63
	Maybe	--	40	4	12	--	4	--	--	7	
	No	25	40	17	17	20	11	20	12	--	2:
	Don't Know	25	--	--	--	5	3	--	.3	7	3
Have you. ever thought of quitting your job?	Y e s	25	60	67	34	40	39	55	38	40	20
	Sometimes	--	--	--	8	5	14	10	12	20	6
	No	**75**	40	33	54	55	43	35	50	40	74
	Don't Know.	--	--	--	--	--	--	--	-_	--	--
Would you guess you'll be working 1 year, 2 years, .5 years or more?	1 year or less	--	25	4	12	10	3	25	15	20	11
	2 years	--	--	17	---	5	3	5	12	7	11
	5 years or more	100	75	62	88	85	79	70	71	67	75
	Don't Know	-		17	--	--	15	10	4	6	3
How is your morale at present?	G o o d	100	100.	67	71	90	59	60	76	*	*
	Fair	--	--	17	17	10	15	35		*	*
	Poor	--	--	16	12	--	26	--	1;	*	*
	Don't Know	--	--	--	--	--	--	5	--	*	*
Is it better or *worse* than it use to be?	Better	100	50	54	32	65	55	55	41	80	66
	S a m e	--	50	25	33	20	15	25	30	13	31
	Worse	--	--	21	29	10	30	20	29	--	'3
	Don't Know	--	--	--	--	--	--	-	--	--	--
How does your morale compare with the guys around you?	Better	75	100	50	33	55	44	45	56	*	*
	Same	25	--	42	58	45	52	55	35	*	*
	Worse	--	--	4	4					*	*
	Don't know	--	--	4	5	-:	-:::	-!			*

Note: Non-inclusion of no response answers account for percentages less than 100?
*Data were not available

Table 49

Perceptions of Job Importance
Non-Professional Staff

Question	Response	Percentages by Company A.	B	C	D	E	F	G	H	I	J
Do you feel that ship-building is important?	Yes	100	75	100	100	90	100	100	97	86	97
	Maybe	--	25	--	--	--	--	--	--	14	3
	No	--	--	—	--	10	--	--	--	--	--
	Don’t know			--		--	--	--	3	--	--
Do you feel that your particular job is important?	Yes	100	100	96	92	90	92	85	88	93	97
	Sometimes	--	--	--	--	5	4	5	6	--	3
	No	--	--	4	--	5	4	10	3	7	--
	Don’t Know	--	--	--	4	--	--	--	--	--	--
How does your family feel about your job?	Good	100	50	62		75	85	70	82	60	46
	Fair	--	--	21	13	15	7	--	6	--	20
	Bad	.-	25	17		5	--	15	3	--	6
	Don't Know	--	25	--	17	5	--	15	6	40	28
Does the company give you a feeling that you are important in getting the job done?	Yes	75	50	37	62	50	59	60	63	80	69
	Sometimes	25	25	25	17	20	4	20.	3	7	6
	No	--	25	38	17	30	33	20	31	7	17
	Don’t Know	--	--	--	4	--	4	--	--	6	8
Is there any way you can influence the company in an important way?	Yes	75	40	38	37	50	25	25	38	20	43
	Sometimes	--	--		4	15	4	5	12	--	11
	No -	,25	60	5:	42	30	64	60	41	67	37
	Don’t Know	--		--	17	5	4	10	9	13	9

Note: Non-inclusion of no response answers account for percentages less than 100%

.Table 50

Working Conditions and Benefits: Compensatory
Non-Professional Staff

Condition/Benefit	Response	Percentages by Company A	B	c	D	E	F	G	H	I	J
Medical Insurance	Good	100	100	67	84	60	48	50	53	73	**74**
	Fair	--	--	12	8	20	15	15	24	7	**3**
	Poor	--	--	17	--	10	22	30	20		**12**
	Don't Know	--	--	4	8	10	15	5	3	11	**11**
Vacations	Good	75	75	25	75	80	63	95	67	73	97
	Fair	25	--	29	4	15	15	5	24	13	--
	Poor	--	25	46	21	5	22	--	3	14	3
	Don; t Know	--	--	--	--	.-	--	--	6	--	--
Wages .	Good	25	75	21	54	65	37	35	53	47	51
	Fair	75	25	37	21	30	30.	30	18	27	20
/	Poor	--	-.-	42	25	5	33	35	29	26	29
	Don ' t Know	-	--	.-	--	-	--	--	--	--	--
Sick Leave	Good	.75	100	'50	80	50	41	50.	38	87	94
	Fair	--	--	21	4	10	4	30	15	--	--
	Poor	--	--	17.	8	10	48		38	7	6
	Don' t Know	25	--	12	8	30	7		9	6	--
Retirement	Good	25	50		39	30	22	20	35	*	*
	Fair	50	50	21	12	30	18	15	12	*	*
	Poor	25	--	29	38	35	41	40	32	*	*
	Don 't *lalow*	--	--	25	21	5	19	25	--	*	*
Working Hours	Good	100	100	83	83	80	92	60	94	87	91
	Fair	--	--	8	--	15	4	35	3	6	6
	Poor	--	--	9	17	5	4	5	3	7	3
	Don' t Know	--	--	--	--	--	--	--	--	--	.-
Safety**	Good	25	25	37	42	45	81	60	50	27	74
	Fair	50	--	30	13	45	11	25	17	40	8
	Poor	25	50	33	12	5	4	5	30	7	9.
	Don' t Know	--	25	--	33	5	4	10	3	26	9

Note: Non-inclusion of no **response answers** account for percentages less than 100%
*Data were not available
*Item not "compensatory, but included for additional information

Table 51

Perceptions of Other Workers
Non-Professional Staff

Question	Response	Percentages by Company A	B	C	D	E	F	G	H	I	J
How do you feel about the guys . you work with?	Good	100	100	83	92’	100	100	‘“90	91	93	94
	Fair	-	--	13	4	--	--	5	3	7	6
	Bad	--	--	--	4	--	--	5	3	--	--
	Don’t Know	--	--	--	--	--	--	--	--	--	--
How hard do the guys around here work?	Hard	50	50	54	75	65	63	55	48	*	*
	Medium	25	--	38	25	25	30	30	40	*	*
	Lax	--	25	4	--	10	7	1 0	9	*	*

Note: Non-inclusion of no response answers account for percentages less than 100%
* Data. not available

Table 52

Promotions
Non-Professional Staff

Question	Response	Percentages by Company A	B	C	D	E	F	G	E		J
Do you have any interest in being promoted?	Yes	100	100	67	71	55	75	75	88	93	77
	Sometimes	--	--	8	--	--	--	--	--	--	11
	No	--	--	25	29	5	18	25	12	--	12
	Don't Know	--	--	--		40	4	--	--	7	--
Do you think you will get promoted?	Yes	75	60	17	17	10	21	50	53	60	*
	Sometimes	--	--	4	17	10	11	--	6	7	*
	No	25	40	75	62	65	46	40	41	27	*
	Don't Know	--	--	4	4	15	18	10	--	6	*
Do you think the promotion process is fair?	Yes	50	60	29	38	40	36	35	20	40	17
	Sometimes	25	20	21	17	10	18	10	24	7	6
	No	25	20	33	33	30	43	30	56	20	69
	Don't Know			17	8	20	--	25	--	33	8

Note :. Non-inclusion of no'response answers account for percentages less than 100%
*Data not available

Table 53

Worker-Supervisor Relationships
Non-Professional Staff

Question	Response	Percentages by Company A	B	CD	E	F,G	HI	J
How do you feel about your boss as a supervisor?	Good	100	75	71	89	65	67’70	83 80 80
	Fair	-	-	-	-	1 3 4	1 5 1 5 5 3	7 9
	Poor	.-	--	16	17	15	15 20	11 7 11
	Don’t Know	--	--	--	--	5	-- -- --	6 .-
Does your boss tell when he feels you have don a good job?	Yes	75	40	37	67	60	64 45	73 60 57
	Sometimes	--	--	13	4	15	7 56	7 3
	No	25	60	42	9	25	25 50	21 7 3 4
	Don’tKnow	--	--	46	--	-	-- -- --	26 6
Does your boss tell when he feels you have done a bad job?	Y e s	75	80	75	67	60	61 55	53 73 63
	Sometimes	--	--	--	8	1	5 4 5	1 8 7 8
	No	25	20	25	12	25	32 20	23 -- 20
	Don’t Know	--	--	--	13	--	3 20	6 20 9
When you approach your boss or someone else on a problem, does it go anywhere?	Yes	100	80	75	63	85	71 70	79 * *
	Sometimes	--	20	--	12	10	11 5	9 * *
	No	--	--	1 7	1	2	5 7 1	0 1 2 * *
	Don’t Know	--	--	8	1	3	- - - 7	1 5 - - * *

Note: Non-inclusion of no response answers account for Percentages less than 100%
*Data not available

Company Comparisons by Category and Employee

As the interviewers traveled to the various companies, it seemed apparent that, in addition to certain trends which tended to exist among all companies, certain qualitative differences between companies also prevailed. An in-depth qualitative analysis of responses will not be included in this report, but an attempt to quantify the inter-company differences will be made here.

The last section compared companies according to the interview categories utilized for the study. This section combines those differences into a quantitative rating. There is nothing absolute about these-ratings; rather, they compare companies one to another. For example, job satisfaction at all companies was rated high; nevertheless, within those high ratings some companies were superior compared to the others and some lower. Table 54 indicates company by company comparisons for production workers, managers and non-professional workers. The table provides a way to make inter-company comparisons in each rating category and to make intra-company comparisons of strengths and weaknesses.

Table 55 attempts to quantify the ratings one step further by adding together the ratings in Table 54 and making a grand total. It may be helpful in understanding those ratings to describe briefly the standings for each company.

Company A. Company A rates at the top for an overall rating compared to the other companies. It's high rating,

Company by Company Comparisons

Area		Management										Production Workers										Non-Professional Support									
		A	B	C	D	E	F	G	H	I	J	A	B	C	D	E	F	G	H	I	J	A	B	C	D	E	F	G	H	I	J
Job Commitment & Morale (Based on eight questions)	Higher	3	0	0	2	2	1	0	0	1	1	1	0	0	2	3	2	1	0	1	3	6	2	1	2	4	0	0	0	2	1
	Middle	5	7	5	,	6	1	7	7	5	6	6	6	4	4	6	4	4	6	8	6	5	0	4	5	4	4	7	6	7	6
	Lower	0	1	3	0	5	0	1	3	1	1	1	4	4	0	1	2	1	0	10	2	2	2	2	012		101				
Job Importance (Based on five questions)	Higher	1	1	0	1	1	2	2	0	0	1	0	0	0	1	1	1	0	2	0	1	3	0	0	0	1	1	0	1	1	0
	Middle	4	3	3	4	3	3	3	4	5	4	5	3	4	3	4	4	5	3	2	4	2	3	4	5	3	3	4	4	3	4
	Lower	0	1	2	0	1	0	0	1	0	0	,	0	2	1	1	0	0	0	0	3	0	02		1	0	11		1	01	1
Working Conditions. (Based on six questions)	Higher	3	2	0	2	Q	’	1	O	O	1	2	2	1	1	3	1	2	.	1	1	0	4	’	3	’	5	0	3	1	0	0	0	1	2
	Middle	3	4	3	2	2	5	3	4	3	4	2	.	4	.	2	3	4	4	2	4	3	2	2	1	3	3	4	2	3	4	5	4		
	Lower	0	0	3	2	4	0	3	2	2	0	2	1	3	0	1	0	3	1	3	0	1	0	3	0	1	4	3	2	0	0				
Perception of Other Workers (Based on two* questions)	Higher	0	0	0	1	0	’	0	0	0	”	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0				
	Middle	3	2	3	2	3	3	2	3	3	2	1	2	1	1	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2					
	Lower	0	1	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Promotion (Based on three questions)	Higher	1	0	0	0	0	0	1	1	0	0	0	.	0	0	0	2	1	2	1	1	3	2	0	0	0	0	0	1	1	0
	Middle	22		03		2		3		22		22		3	112		112		1	1	1	0	1	2	2	2	.	2	3	1	2	2
	Lower	0	1	3	0	1	0	0	0	1	1	0	2	2	1	2	0	0	0	1	1	0	0	1	1	1	1	0	1	0	1				
Supervisor-Worker (Based on four questions)	Higher	0	0	’	0	2	0	2	1	0	1	0	0	1	0	1	3	1	0	1	1	0	3	2	0	1	0	0	0	1	0	0			
	Middle	4	4	2	2	3	2	3	3	3	3	4	0	2	2	1	3	4	3	2	4	1	2	3	3	3	4	3	2	4	4				
	Lower	0	0	2	0	1	0	0	1	0	1	0	3	.	2	1	“	0	0	0	0	1	0	0	0	1	0	1	0	1	1	0	0		
Job Satisfaction (Based on one question)	Higher	‘	0	0	0	0	O	O	Q	O	O	O	O	O	0	’	0	1	1	0	1	1	O	O	O	O	1	O	O	O	O	O			
	Middle	1	1	0	1	1	1	1	0	0	1	1	1	0	1	0	0	0	0	0	00		11110		1	(1	1	1	0)						
	Lower	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	00	00		000		0	L	L	!)	1.						

*For this area two questions were used for production workers and non-professional support staff; three questions were used for management.

Note: Figures represent, for each area, the numbers of questions on which each company rated above the “average” company (higher) , about the same as the “average” company (middle), and below the “average” company (lower) . For example, in the Area of Job Commitment and Morale, Company A rated above the "average” company on three out’of the eight questions defining that area and about the same as the “average” company’ on five of the eiqht auestions. It did not rate below the “average” company on any of the eight questions.

Table 55
Ratings by Companies
Total All Categories

	A	B	C	D		E	F	G	H	I	J
Production Workers *											
Higher	3	2	1	8	9	9	3	7	4	1	0
Middle	22	15	14	18	16	18	21	21	16	18	
Lower	4	1	2	1	4	3	4	2	5	1	9	1
Managers **											
Higher	8	3	0	8	3	6	4	1	3	4	
Middle	22	23	16	20	15	24	21	21	22	22	
Lower	0	4	1	4	2	1	2	0	5	8	5	4
Non-Professional Support*	1	8	1	1	1	7	8	1	0	3	5	3
Higher	8	14	20	19	17	21	21	21	23	22		
Middle	3	4	8	3	4	7	8	5	1	4		
Lower												
Grand-Totals											
Higher	29	16		22	52	01	6		71	11	21	7
Middle	52	52	50	57	48	63	63	63	61	62		
Lower	7	2	0	3	6	8	2	0	9	1	8	1	4	1	5		9

*Results based on thirty questions
**Results based on twenty-nine questions

Note: Figures represent the numbers of questions from all seven areas of Table 54 combined, on which each company rated above the “average” company (higher) , about the same as the “average” company (middle) , and below the "average" company (lower) .

however, is achieved primarily because its non-professional support services rated distinctly higher than all of the other shipyards. Their managers also rated high, but their production workers ratings were toward the lower end of the company comparisons. Although rated at the top overall, Company A may well concentrate on" the discrepancy in job satisfaction between their production workers and the other workers at the company.

Company B. Company B is rated in the lower half of the overall ratings of the companies and, like Company A, provides a discrepancy between the relative high ratings by support services workers compared to the low ratings of production workers and managers. The overall ratings of support services workers is second highest among the companies; and toward the bottom with the other employee categories.

Company C. Company C has the lowest rating of any shipyard and their low rating tends to hold with all employee categories. Much needs to be done at Company C to improve motivation at all levels of the operation. Programs can be developed to help Company C and such programs may well be a future phase of research using the data of this study as initial input.

Company D. Company D has strong ratings comparable to the high overall ratings achieved by Company A. Further, the strong ratings tend to be evenly distributed over all levels of the organization so that, unlike Company A, the high ratings of the production workers are balanced with the high ratings

of the managers and support services workers. Company D demonstrates strong potential for increased motivation and productivity.

Company E. Company E rates as an average company with the workers tending to have higher ratings than the managers. Managers at Company E demonstrate considerable stress compared to other companies, and programs of further work toward increased motivation should begin at Company E with the middle and lower management groups

Company F Company F rates in the upper half of the surveyed companies with its highest ratings achieved with the hourly production workers. Company F has distinct . strengths in the production. areas at both the manager and hourly worker level and seem ready for further motivational programs leading toward increased productivity. The area of greatest need, however, is in the support services areas and, although less ready, the support services area deserves first attention.

Company G Company G rates near the bottom of the companies studied. Tensions and dissatisfactions were experienced at a greater than average degree at all levels of the operation. Although this is experienced to the greatest degree among support services workers, production workers and managers also need help. Programs need to be designed to reduce employee tensions which currently interfere with production and develop positive programs which steer worker

energies into more constructive directions.

Company H. Company H also is in motivational trouble. The greatest problems are at the management levels and, although the workers remain reasonably satisfied and productive if. the management problems are,not soon rectified, the turmoil will be increasingly experienced at the hourly production worker level. Already the problems have filtered down to the support services level. Positive programs aimed at all levels of management need to be instituted immediately.

Company I Company I rates low from middle management to the hourly workers and, although the tables do not show it, Company-I provides the greatest discrepancy between the motivational procedures utilized at the level of top management and those used at lower levels of the organization. Caring and consideration prevail as management techniques at the top; motivation by fear is perceived to prevail at the lower. levels. Such motivational discrepancies cannot endure-without eventual negative effects on production. These discrepancies need to be understood and a program designed to dissolve them and be replaced with a more totally positive motivational system

Company J. Company J has a high rating, due primarily to the hourly production workers who rate among the highest in most categories. Significant difficulties exist at the various levels of management and these difficulties need to be recognized and resolved. Further, unrest also exists among the professional support workers at a rate greater than

average. However, the work force at the direct production . levels is strong and should sustain the company while necessary changes are made at the managerial and support levels.

CHAPTER IV

SUMMARY AND CONCLUSIONS

One of the most significant motivating factors for worker is to believe that the company management is interested in the individual worker and his problems- and is willing to attempt to do something about them. Although a limited understanding of workers' needs may be obtained from the research literature on worker motivation, since workers are unique, the only way to really understand the workers' needs in a particular industry or particular company is to directly ask the individua . local workers. Further, even the process of attempting to determine the worker's needs and problems is motivating, since . it tends to help the worker to feel that the company cares enough to ask him. Those responsible for" initiating this study, then, have taken a significant first step in improving motivation.

Since motivation in industry is a complex phenomenon, for the purpose of this study motivation has been analyzed in terms of relationships to some of its various segments beginning with job satisfaction, the core factor around which all the other dimensions of the motivational process would evolve. The factors, in addition to job satisfaction include job commitment and morale, job importance, working conditions and benefits, workers perceptions of co-workers, promotion, and supervisor-worker relaticmships.

The body of the report is organized around the aforementic

categories and the results are reported accordingly. For the purposes of this summary, however, an attempt is made to utilize the direct data from this study interrelated with other research data to present some conclusions and recommendations which are aimed toward developing a more effective motivational system at the local shipyard level. These conclusions relate mainly to the quantitative data and are presented, not in terms of priority importance, but in sequential order.

1. Nearly 1,300 employees, representing all segments of personnel at.ten shipyards, were utilized for this study. From this total sample, only a small percentage of workers chose shipbuilding because of a love of the sea, or family tradition, or patriotic reasons, but most workers took a job at a shipyard primarily because a job was available. There tends to be no more romantic worker identification with obtaining a job in a shipyard than in comparable industries.

2. While recognizing the validity of the above finding; there is another finding which relates to work pride regarding both product and process. Nearly all shipyard workers deem both shipbuilding. as an industry and their own job in the process of shipbuilding to be essential for the national defense, economy and commerce of this country. This product identification has not been sufficiently emphasized at most shipyards. Employee pride related to product is, if effectively

utilized, an inherent motivator.

3. Current literature tends to indicate that the industrial worker in America is unhappy with his job. The interviewers for this study expended most of their interview time in listening to worker complaints and negative comments related to both job and company. When a final evaluation needed .to be made, however, most workers tended to rate their overall job satisfaction high and, at least at America's shipyards, had a high level of job identification.

4. Worker motivation tends to increase when jobs are designed to provide the worker with what he perceives to be meaningful work. When his job allows the worker to feel personally responsible for a meaningful portion of his work, and provides results which are perceived as worthwhile to the individual worker, motivation increases. Further, the job must match the capabilities and skills of the employee. .If a job is too frustrating or difficult, or too simple and boring, motivation decreases. To effectively match the employee to his job requires continual evaluation of each job and the employee qualities necessary to fulfill it.

5. Although most shipyard workers believe their job in an essential industry to be highly important, many believe that their company's management has no interest in them as persons, is unaware of what they do, and is oriented to machine rather than persons.

6. Most hourly production workers believe that they do

not influence the company in any important ways. The fewer than twenty percent of the workers who believe their influence is important perceive that influence to cone primarily in the way they perform their own job. The majority of workers who believe that they cannot influence the company in important ways cited that it was futile to try, that the company didn't care or was too big or set in its ways, or that their low position or lack of knowledge prohibited their influence.

7. The most common spontaneous complaint among production workers which is related to working conditions concerned inadequate schedling, planning, coordinating and communication between crafts, shifts and various working groups in the shipyard. The second greatest number of complaints related to inadequate machines, equipment-and materials. The third most common complaint concerned some aspect of the physical working environment.

8. Safety was the physical factor most frequently discussed by the workers and, although all were concerned with safety, about as many believed the company, to be safety conscious and working on improving safety conditions as believed the yard to be negligent related to safety. Safety was considered a greater problem to hourly production workers than any other employee group.

9. The workers' perceptions of the adequacy of their wages produced a mixed result. Some workers believed the pay

to be superior to that in some comparable industries; others believe their pay to be low and not comparable to other companies or construction workers. Wages tended to be less a problem, however, to most workers than problems already cited.

10. Wages become increasingly motivating when workers perceive that their pay is directly related to their performance Oftentimes pay is related to non-performance factors such as job level or seniority and, therefore, comparatively less motivating. Consequently, some companies have elected to use some incentive system to tie more closely production to wages. Normally most incentive systems indicate greater success by relating to an individual, rather than group, performance. The experience of at least one shipyard suggests some evidence to the contrary. Although the incentive pay tied to the individual's work performance has been normally most motivating, more experimentation needs to be done with group incentives programs in order to determine whether the group incentive, when effectively organized, may prove additionally motivating due to group identification or group pressures not present in individual incentive plans.

11. If effectively done, measuring a workers performance can be highly motivating. This means that an effective job measurement system including specific criteria for evaluation must be available in addition to a feedback system which provides the worker with immediate-knowledge of results and

recognition for superior performance.

12. One of the most important motivational' factors is the relationship of the worker to his immediate supervisor. Although it is impossible to define all of the characteristics of the "perfect" supervisor, effective leadership does include the leader's sensitivity to those factors which influence the personal and interpersonal work behavior of group members, the ability to analyze those factors impairing personal or group. effectiveness, and the empathy and consideration necessary to individual needs which allow the group to keep moving.

13. The current study indicates that the employees' relationship to his immediate supervisor is a key one, and for a significant majority, a positive one. Among we positive factors most frequently mentioned about the workers' immediate supervisor include the folloings: his technical competence, fair treatment, good human relationships, helpful, and freedom to do the job. The negative comments related to the workers' immediate supervisor were fewer and less consistent but included the following: overcritical, shows favoritism inadequate leader, poor communicator, technically incompetent. For most employees, the relationship with the immediate supervisor tends to be better than the workers' opinion of and relationship with higher management.

14. Feedback at all levels is essential. An employee will tend to improve his performance if he has continuing feedback related to his progress. It is important for the

supervisor at the upper levels of management to give consistent feedback related to performance just as it is the supervisor of the hourly worker. Feedback, both positive and negative, needs to be clearly understood by both supervisor and worker, and presented in a manner which motivates constructive short and long-ranqe changes.

15. Some workers are more motivated when the supervisor gives them a considerable amount of his time while other workers work best with a minimum of supervisor surveillance. For example, the younger workers tend to need and request more attention and direction from their supervisors than do the older, more experienced workers. In fact, sometimes the older workers consider the supervisory attention more of an interference than a help. However, some workers, no matter their age and experience, need considerable feedback, so that the useful generalization related to age still must be individually applied.

16. Positive reinforcement (commending good performance) is generally considered a superior motivator to negative reinforcement (reproof for poor performance). Generally the shipyard industry, at all levels of the organization, emphasize negative rather than positive reinforcement. Some companies in industries other than shipbuilding who have attempted a change from censure to commendation report immediate and, occasionally, miraculous positive results.

17• Although positive reinforcement is generally a superior motivator to negative reinforcement, some employees,

normally the most competent ones, may be motivated by reproof rather than commendation, or are self-motivated and aced little external motivation. The principle of reinforcement, like every motivation technique, must be applied appropriately to the unique needs of the individual worker. Generally positive reinforcement is the superior motivator but, to be optimally effective, the supervisor must understand his workers well enough to discern which motivational technique work best for each worker.

18. Some employees are sufficiently motivated by internal satisfactions which comes from the employee's own realization that he has done an effective or superior job. Most workers, however, in addition to internal satisfaction, also need external recognition. Merit salary increases, promotions and increased responsibility and recognition are common and effective ways to acknowledge deserving performance. Since such recognition is not always possible, these means may need to be supplemented by a recognition system which provides other kinds of rewards or, awards to individuals or groups for exceptional performance.

19. Employees at all levels of the shipyard tend to hav a high regard for their co-workers, including both technical competence and positive interpersonal relationships. This finding was one of the most consistent and significant results from the study.

20. Only about one-half of the hourly production workers,

however, believe that the majority of their co-workers worked sufficiently hard to do the job although, generally, the closer the proximity of the worker, the harder he was perceive-d to work. That is, most workers indicate that they work harder than their immediate peer, who work harder than workers in other related departments, who work harder than workers in most departments more distant from the workers' station.

21. In comparing production managers to hourly production workers, the conclusions are as followss production managers have higher job satisfaction,. enjoy their jobs more, identify more with the company; have higher morale; perceive that they have a greater influence at the company; believe that their problems and recommendations get greater action; are more satisfied with wages and benefits with the exception of longer unpaid working hours; believe safety conditions to be better; and have a greater desire to be promoted, have a higher expectation of being promoted, and think more highly of the promotion process.

22• Much experimentation has occurred with participative management or participative decision-makting as a motivational concept. Most studies, both within and without the ship-building industry, indicate that participative decision-making normally results in increased motivation and productivity of those involved. When the worker participates in making decisions whic h effect him, he is more likely to be motivated to make those decisions succeed. The success is greater when the employees possess high competence and high needs for

independence and are members of a group that favor Participation. The quality of the group decisions are enhanced when the employees have sufficient relative information and time for discussion, and when employee self-interests do not conflict with the group interests.

23. Effective communication within a company demands constant vigilance. Every shipyard represented in this study suffered from communication problems, some severe. It may be impossible to eliminate all problems of communication within an organization but much can be done to improve communication. First, there must be a genuine desire to communicate at the various levels of the organization. Second, communication must be recognized as multi-dimensional with attention given to horizontal as well as two-way vertical communication. This means that effective communication channels need to be found to transmit information from management to employees and, an area frequently ignored, from the employees to management. Formal means of communication, such as company newspapers, closed-circuit television, employee suggestion systems, attitude measurement programs and the like, need to be supplemented by more human contacts of management and workers. This is difficult in large organizations, but some companies find that when top management gets out of the confines of their administrators offices and has direct personal contact with the workers through plant tours, informal talks, etc. that both communication and motivation improve.

24. Contrary to certain research hypotheses held prior to this study which presupposed a less than healthy shipbuildin industry, the results of this study are encouraging in that many more strengths than weaknesses are apparent at most shipyards. This does not mean, that serious motivational problems do not exist. It does mean that for most yards the strengths portend both the ability and the motivation to recognize weaknesses and attempt to alleviate them. An attempt has been made in this report to crystallize inter-company and intra-company. comparisons according to the factors utilized inthis study. Hopefully these data may be used as the foundation to develop programs at the local yards aimed at perfecting,the motivational processes.

Bibliography

Adams, J. S. "Injustice in Social Exchange," in Berkowitz (Ed.), Advances in Experimental Social Psychology, vol. 2. New York: Academic, 1965, pp. 267-299.

Alutto, J. A., & Acito, F. Decisional Participation and Sources of Job Satisfaction: A Study of Manufacturinq Personnel. Academy of Management Journal, 17, 1, 1975.

Argyle, M. The Social Psycholoqy of work. New York: Taplinger Publishing Co., 1972.

Argyris,. C. Interpersonal Competence and Orqanizatianal Effectiveness. Dorsey Press, 1962.

Atkinson, J. W. Motives in fantancv, action, and society. Princeton, N.J.: Van Nostrand, 1958.

Beckhand, R. Organizational Develonment: Strategies and Models. Addison Wesley, 1969.

Bennis, W. G. Changing Organizations. McGraw Hill, 1966.

Blake, R. R., & Mouton, J. S. "Grid Organization Development." Personnel Administration, Jan-Feb. 1967.

Burke, W. W. "Management and Organizational Development: What is the Target of Change?" Personnel Administration, 34 (1971).44-56.

Campbell, H. Group Incentives. Occupation Psychology 1952, 26, 15-21.

Coch, L., & French, J. R. Overcoming Resistance to Change. Human Relations, 1948, 1, 512-532.

Cummings, L. L., & Scott, W. E. (Eds.) Readinqs in Organizational Behavior and Human Performance. Homewood, Ill.: Richard P. Irwin, Inc., 1969.

Davis, K. Human Relations at Work. New York: McGraw Hill, 1962.

Davis, L. E. Job Satisfaction Research: The post Industrial View. Industrial Relations, 1971, 10, 179-193.

Denhardt, R. B. Leadership Style, Workker Involvernent and Deference to Authority. Sociology and Social Research, 1970, 54, 172-180.

Fiedler, F. E. "Validation and extension of the contingency model of leadership EFFECTIVENESS: A review of empirical findings." Psychological Bulletin, 1971, 76, 128-l48.

Fleishman, E. A., & Harris, E. F. "Patterns of Leadership Behavior Related to Employee Grievances and Turnover." Personnel Psychology, 1962, 15, 43-56.

Ford, R. N. Motivation Through the Work Itself. American Management Association, 1969.

Ford, R. N., & Borgatta, E. F. Satisfaction With Work Itself. Journal of Applied Psychology, 1970, 54, 128, 134.

French, J.R.P., Kay, E., & Meyer, H. H. participation in the Appraisal System. Human Relations, 1966, 19, 3-20.

Gamboa, V. U., & pedalino, E. "Behavior Modification and Absenteeism: Intervention in One Industrial Setting." University of Michigan Working Paper, 1973.

Gibb, C. A. Leadership. In G. Lindzey and E. Aronson (Eds.), The Handbook of Social Psychology (2nd Ed.) . Reading, ES. : Addison Wesley, 1969.

Georgopoulos, B. S., Mahoney, G. M., Jones, N. W. A Path Approach to Productivity. Journal of Applied Psychology, 1957, 41, 34, 5-353.

Goldthrope, J. H., Lockwood, D., Bechhofer, F., & platt, J. The Affluent Worker: Industrial Attitudes and Behavior. Cambridge, London: Cambridge University Press, 1968.

Greiner, L. E. "Patterns of Organizational Change." Hamard Business Review, 45, 1967.

Guest, R. H. Men and Machines: An Assembly-Line Worker Looks at his Job." Personnel, *May 1965.*

Guren, G., Veroff, J., & Feld, S. Americans View their Mental Health. New York: Basic Books, 1960.

Hackman, J. R. Group Influences on Individuals in Organizations. In M. D. Dunnette (Ed.), Handbook of Industrial and Organizational Psychology. Chicago Rand-McNally, 1975.

Hackman, J. R., & Lawler, E. E. Employee Reactions to Job Characteristics. Journal of Applied Psychology, 1971, 55, 259, 286.

Hammer, w. C., Tosi, H. L., & Hammer, W. C. (Ed) "Reinforcement Theory and Contingency Management." Organizational Behavior and Management, A Contingency Approach. St. Clair Press, 1974.

Herrick, N. Q. "Other Side of the Coin." Paper delivered at the 20th Anniversary Invitational Seminar of the Profit Sharing Research Foundation. Evanston, Ill.: Nov. 17, 1971.

Herzberg, F., Mausner, B., & Snyderman, The Motivation to Work. New York: John Wiley; 1959.

Herzberg, F. "One More Time: How Do you Motivate Employees?" Harvard Business Review, 1968, 46, 53-62.

Herzbera, F., Mausner, B., & Peterson, R. O., & CampWell, D. F. Job Attitudes: Review of Research and Opinions. Pittsburgh: Psychological Services of Pitt. 1957.

Hill, R. "The Company that Publicized its Shortcomings." Management Review, July 1973.

House, R. J., Filley, A. C., & Kerr, S. Relations of Leader Consideration and Imitating Structure to Panel D Subordinates' Satisfaction. Administrative Science Quarterly, 1971, 16, 19-30.

Janson, R. "Job Enrichment: Challenge of the 70's." Training and Development Journal, June 1970, 7-9.

Johnson, W. B. "Job Redesign Enrichment--Exploring the Limitations ." Monthly Labor Review, July, 1974, 35-41.

Kaufman, H. Task performance, expected performance, and responses to failure as functions of inbalance in self-concept. Unpublished doctoral dissertation, University of Pennsylvania, 1962.

Kay, E., Meyer, H. H.. & French, J. R. "Effects of Threat in Performance Appraisal Interview." Journal of Applied Psychology, 1965, 49, 311-17.

Kockums Report 1970. Unpublished Company Report.

Kockums Way 1975. Unpublished Company Report, 1975.

Korman, A. K. "Consideration" "initiation structure" and Organizational Criteria-- review. Personnel Psychology, 1966, 349-362.

Korman, A. K. The prediction of Managerial Perfornance: A Review. Personnel Psychology, 1968, 21, 295-322.

Kornhauser, A. Mental Health and the Industrial Worker. A Detroit Study. New York: John Wiley & Sons, 1965.

Landen, D. L., & Carlson, H. C. "Employee Motivation: A Vast Domain of Unrealized Human and Business Potential" in A. J. Marrow (Ed.), American Management Association, in preparation, 1973.

Lawler, E. E. Motivation in Work Organizations. Brooks: Cole Publishing Co., 1971.

Lawler, E. E. Pay and Organizational Effectiveness: A Psychological View. New York: McGraw Hill, 1971.

Lawler, E. E., & Hackman, J. R. The Impact of Employee Participation in the Development of Pay Incentive Plans: A Field Experiment. Journal of Applied Psychology, 1969, 53, 567-471.

Levitan, S.A., & Johnson, W. B. Job Redesign Enrichment Exploring and Limitations. Monthly Labor Review, July, 1973, 35, 41.

Lewin, K. "Group Decision and Social Change," in G. E. Swanson, T. M. Newcomb, & E. L. Hartley (Eds.), Readings in Social Psychology. Holt, 1952, 459-473.

Likert, R. New Frontiers in Management. McGraw Hill, 1961.

Liksrt, R., & Katz, D. "Supervisory Practices" and Organizational Structures as they Affect Employee Productivity and Morale." American Management Association Personnel Series No. 120, 1948.

Locke, E. A.& Bryan, J. F., & Kendall, L. M. Goals and Intentions as Mediators of the Effects of Monetary Incentives on Behavior. Journal of Applied Psychology, 1968, 52 (2), 104-121.

Locke, E. A., Cartledge, N., & Koeppel. Motivation Effects of Knowledge of Results: A Goal Setting Phenomenon. Psychological Bulletin, 1968, 70, 474-485.

Lowin, A. participative Decision Making: A Model, Literature Critique and Prescriptions for Research. Organizational Behavior and Human Performance, 1968, 3, 68-106.

Luthans, F. Organizational Behavior. McGraw-Hill, 1973.

Luthans, F., & White, D. O. "Behavior Modification: Application to Manpower Management." Personnel Administrator, July-August, 1971, 41-47.

Marrow, A. J., Bowers, D. G., & Seashore, J. E. Management by Participation. New York: Harper & Row, 1967.

Meyer, H. H., Kay, E., & French, J. P. Split Roles in Performance Appraisals. Harvard Business Review, 1965, 43 (1) 123-129.

Myers, M. S. "Who Are your Motivated Worker?" Harvard Business Review, 1964, 42 (1), 73-88.

Mills, J. D. Job Satisfaction in Large Factories. Personnel practice Bulletin, 1967, 23 (4), 252-260.

Morse, N. C., & Reiner, E. The Experimental Change of a Major Organizational Variable. Journal of Abnormal and Social Psychology, 1956, 52, 120-129.

Myers, Charles A. "Basic Employment Relations" in Kornhauser, A. w., Rubblin, R., & Ross, A. M. (Eds.), Industrial Conflict. New York: McGraw-Hill, 1954.

Newcomb, T. M. Motivations in Social Behavior. In Current Theory and Research. Lincoln: University of Nebraska Press, 1954.

Nord, W. R. "Beyond the Teaching Machine: The Neglected Area of Operant Conditioning in Theory and Practice." Organizational Behavior and Human Performance, 1969, 375-401.

Opsahl, R. L., & Dunnette, M. D. The Role of Financial Compensation in Industrial Motivation. Psychological Bulletin, 1966, 66, 94-118.

Patchen, M. "Absence and Employee Feelings about Fair Treatment." Personnel Psychology, 1960, 13, 349-360.

Porter, L.W., & Lawler, E. E. Managerial Attitudes and Performance. Honewood, Ill.: Irwin-Dorsey, 1968.

Porter, L. W., Lawler, E. E., & Hackman, R. J. Behavior in Organizations. McGraw-Hill Book Co., 1975.

Porter, L. W., & Steers, R. M. Organizational Work, and Personal Factors in Employee Turnover and Absenteeism. Psychological Bulletin, 1373, 80, 151-176.

Pritchard, R. D., Jorgenson, D. O., & Dunnette, M. D. The Effects of Perceptions of Equity and Inequity on Worker Performance and Satisfaction. Working paper, Purdue University, 1970.

Reif, W. E., & Schoderbek, P. "Job Enlargement: Antidote to Apathy." Manaqement of Persornnel Quarterly, Spring 1966, 16-23.

Rogers, C: R.: Counseling and Psychotherapy. Houghton Mifflin, 1942.

Ross, I. C., & Zander, A. Need Satisfaction and Employee Turnover. Personnel Psychology, 1957, 10, 327-338.

Ruh, R. A., Johnson, R. G., & Scontrino, P. M. The Scanlon Plan: Participation in Decision Making and Job Attitudes. Journal of Industrial and Organizational Psychology, 1973 Spring No. 1, 36-45.

Sales, S. "Supervisory Style and Productivity: "Review and Theory. Personnel Psychology, 1966, 19, 3.

Sawatsky, J. C. "Psychological Factors in Industrial Organizations Affecting Employee Stability." Canadian Journal of Psychology, 1951, 5, 29-38.

Sayles; L. R. Behavior of Industrial work Groups: Prediction and Control. New York: Wiley, 1958.

Schein, E. H. The Individual, the Organization and the Career:.A Conceptual Scheme. Journal of Applied Behavior Science, 1971, 7, 401-426.

Schwab, D. P. Conflicting Impacts of Pay on Employee Motivation and Satisfaction. Personnel Journal, 1974, (Mar) 53 (3) , 196-200.

Schotters, F. J. "Oldsmobile Action Program on Absenteeism and Turnover." G.M. Personnel Development Bulletin, No. 2, Feb.. 3, 1972.

Schotters, F. J. "Job Enrichment or Buick Products Engineerin G.M. Personnel Development Bulletin, No. 22. June 4, 1973

Seigal, L. Industrial Psychology. Homewood, Ill.: Richard D. Irwin, Inc., 1969.

Siegel, J. P., & Bowen, D. "Satisfaction and Performance: Causal Relationship and Moderating Effects." Journal of Vocational Behavior, July 1971, 1 (3), 263-269.

Skinner, B. F. Science and Human Behavior. Macmillan, 1953.

Stewart, P. A. Job Enrichment: In the Shop, in the Management Function. Center for Labor and Management, University of Iowa, 1967.

Strauss, G. Organizational Development: Credits and Debits." Organizational Dynamics, 1973, 1, 2-18.

Svetlik, B., Prien, E., & Barrett, G. Relationship between Job Difficulty, Employees Attitude Towards Job, and Supervisors Ratings of the Employees Effectiveness. Journal of Applied Psychology, 1964, 48, 3 2 0 - 3 2 4 .

Thorndike, F. L. Animal Intelligence. Macmillan, 1911.

Turner; A. N., & Lawrence, P. R. Industrial Jobs and the Worker. Boston: Harvard University Graduate School of Business Administration, 1965.

Viteles, M. S. Motivation and Morale in Industry. New York: W. W. Norton and Co., 1953. -

Vroom, V. Ego Involvement, Job Satisfaction and Job Performance. Personnel pychology, 1962, 15, 155-177.

Vroom, V. H. Work and Motivation." New York: Wiley, 1964.

Walker, C. R. "Work Methods, Working Conditions and Morale" in Kornhauser, A. W., Dublin, R., & Ross, A. M. (Eds.) Industrial Conflict. New York: McGraw-Hill, 1954.

Walker, C. R., & Guest, R. H. The Man on the Assembly Line- Cambridge: Harvard University Press," 1952.

Whyte, W. F. Money and Motivation. New "York: Harper and Row Publishers, Inc., 1955.

Whyte, W. F. "Skinnerian Theory in Organizations." Psychology Today, April 1972, 67-68, 96,. 98, 100.

Wiard, H- "Why Manage Behavior?" A case for positive reinforcement." Human. Resource Management, Summer 1972, 15-20.

Wickert, F. R. Turnover, and Employees Feelings of Ego-Involvement in the Day-to-Day Operations of a Company. Personnel Psychology, 1951, 4, 185-197.

Work in America. Report of a special task force to the Secretary of Health, Education and Welfare. Cambridge: MIT Press, 1973.

Yoder, D. Personnel Management and Industrial Relations. Englewood Cliffs, N.J.: prentice-Hall, Inc., 1962.

Za;ezink, a., Charistensesn, C.R., & JRoethlisbeerger, F. j. The Motivation, Productivity/ and satisfaction. of Workers . Boston: Harvard University Graduate School of Business Administration, 1958.